Create table latex

Tables are used to imagine data in a structured manner. It makes the information easier and easier to read. In this tutorial we will learn how to make a simple and multi-page table at LaTeX with customization in their rules and distances, combine and color rows and columns, deal with captions, references, cell widths, positions and neglected cells. The table in LaTeX can be created using the table environment and tabular environment that uses ampersands (&amp;)) as a column break and a new line symbol (\\) as a line break. Vertical lines (|) are passed as arguments and letters l, c and r tell us whether we want to put content on their left, center or right. Here are the codes and results from a simple table created. \documentclass{article} \usepackage[utf8]{inputenc} \title{table} \start{document} \start{center} \start{tabular}} c c } a &amp; c \\ a &amp; document} \start{center} \start{tabular}} c c } a &amp; c \\ a &amp; document} c \\ a &amp; b \\ \end{tabular} \end{center} \end{document} Output code above Command \hline is used to place lines at the top and bottom of the table. Creating a table with boundaries is shown below: \documentclass{article} \usepackage[utf8]{inputenc} \title{table} \start{document} \start{tabular}} |c | b &amp; c \\ a &amp; b \\ a &amp; c \\hline \hline \end{tabular} \end{center} \end{document} Output code above Number of times \hline commands will be written is the number of hording lines that will indicate between rows. Multiple entries of this command can be used to distinguish between column titles from the details. The table can be created by providing a fixed length of the column as well as by providing measurements between vertical lines (|) where the argument is approved with letters. From l, c and r we use each m, p and b for middle, up and down. For example, { {m{5em} |m{1cm} |m{1cm}| To create multiple page schedules in LaTeX users should refer to the old package. The table is produced so that it can be broken down by the LaTeX page breaking down the algorithm. The code uses four elements: 1. \endfirsthead: the content above this command will appear at the beginning of the table on the first page.2. \endhead: content placed before this command and below \endfirsthead will be displayed at the top of the table on each page except the first.3. \endfoot: content placed after \endhead and before this command will appear at the bottom of the table on each page except the last.4. \endlastfoot: content after \endfoot and before this command will be displayed at the bottom of the table but only on the last page where the table appears. Examples of multi-page tables in LaTeX are shown below: \usepackage[utf8]{inputenc} \usepackage{longtable} \start{document} \start{longtable} [c] { | | | c | — \hline \multicolumn{2} { | c | } {Table Startup\\ \hline Food &amp;amp; Name \\ \hline \endfirsthead \hline \multicolumn{2} { c | } {Table Continuity}\ref{long}}\\\hline Food &amp;hline; Name\\ \hline \endhead \hline \ endfoot \hline \multicolumn{2} { | c | } {End of Table}\\ \hline \endlastfoot Lots line &amp; like this \\ Many &amp;lines; like this \\ Many &amp;lines; such as \\ \end{longtable} \end{document} Output code on the command \multicolumn and \multirow used to combine rows and columns in the Sample table various columns are shown below: \documentclass{article} \usepackage[utf8]{inputenc} \start{document} \start{tabular} { { {3 cm} | p {3 cm} | p {3 cm} | } \ \hline \multicolumn{3} | {Books}\\ \hline Food Name &amp; Author &amp; Publications \\ \hline Book1 &amp; Author1 &amp; P1 \\ Book1 &amp; Author2 &amp; P2 \\ Book1 &amp; Author &amp; P3 \\ Book1 &amp; Author4 &amp; P4 \\ \hline \end{tabular} \end{document} Output code above Sample multiple lines is as follows: \documentclass{article} \usepackage[utf8]{inputenc} \start{document} \start{center} \start{tabular} { | c | — \hline c1 &amp; c2 &amp; c3 \\hline \multirow {3} {4em} {a} &amp; c \\a&amp;b\\&amp; b\\hline \end{tabular} \end{center} \a} \a} \end}. The three important commands used are as follows: 1. \caption{}: this command is used to create captions for tables placed either above or under table.2. \label{}: this command is used to refer to the table in document.3. \ref{}: this will be placed by a number that matches the referenced table. \documentclass{article} \usepackage[utf8]{inputenc} \start{document} \start{table} [h!] \centering \start{tabular}{ || c || } \hline Col1 &amp; hline Col1 &amp; Col2 &amp; Col3 &amp; Col4 \\ [0.5 ex] \hline \hline 1 &amp; 2 &amp; 3 &amp; 3 &amp; 4 \\ 5 &amp; 6 &amp; 7 &amp; 8 \\ 9 &amp;; 10 &amp;&amp; 11 &amp;3; 12 \\ 13 &amp;; 15 &amp;;; 16 \\ 17 &amp; 18 &amp; 19 &amp; 20 \\ [1ex] \hline \end{tabular} \caption{Table to test captions and labels} \label {table:1} \end{table} \end{document} Output code above For the table to be established at what position it must be placed, parameter h! should be placed in a desk environment. Some other approved parameters mentioned below: 1. h: the table will be placed here approximately.2. t: the table is placed at the top of the page.3. b: the table is placed at the bottom of page.4. p: place the table on a special page for table only.5. !: overcome the external LaTeX parameters6. H: place the table in the exact location7. \centralized: the center of the schedule. Here is an example of the table placed here \documentclass{article} \usepackage[utf8]{inputenc} \start{document} \start{table} [h!] \centering \start{tabular}{ || c c || c c || } \hline C1 &amp; C2 &amp; C2 &amp; &amp; C4 \\ [0.5).ex] \hline 1 &amp; 2 &amp; 3 &amp;amp; 4 \\ 2 &amp; 5 &amp;amp; 9 \\ 3 &amp; 8 &amp; 7 &amp;amp; 0 \\ 4 &amp; 6 &amp; 6 \\ 5 &amp; 8 &amp; 3 \\ [1ex] \hline \end{tabular} \end{table} \end{table} the codes above this Section include coloring rows, columns, cells and lines. Below explains how: 1. Color of the line: In LaTeX the colored line uses the command \arrayrulecolor.2. Cell background color: the command \cellcolor is used to set the background color of the cell. The color name can be set in the brace or pass the format parameters in the bracket and then set the desired color in the brace using format.3. Row background color: command \rowcolor is a line background color.4. Color background column: command ewcolumntype{s}{&gt;{\columncolor[HTML]{AAACED}} p{3cm}} used background column color. \documentclass{article} \usepackage[utf8]{inputenc} \usepackage[table]{xcolor} \setlength{\arrayulewidth}{1mm} \setlength{\tabcolsep}{18pt} \renewcommand{\arraystretch}}{s}{&gt;{\columncolor[HTML]{AAACED}} p{3cm}} \arrayulecolor[HTML]{DB5800} \startg{document} \start{tabular} {|s|p{3cm}|p{3cm}} } Publication \\ \hline B1 &amp; A1 &amp; P1 \\ \rowcolor{gray} B2 &amp; A2 &amp; P2 \\ B3 &amp; A3 &amp; P3 \\ B4 &amp; A4 &amp; P4 \cellcolor [HTML]{AA0044} AND \\ B5 &amp; A5 &amp; P5 \\ \hline \end{tabular} \end{document} Output code on the Command used is as follows:1. \setlength{\arrayrulewidth}{1mm}: set the boundary thickness of the table.2. \setlength{\tabcolsep}{18pt}: the space between the text and the left/right border of the cell containing it is set to 18pt with this command.3. \renewcommand{\arraystretch}{1.5}: the height of each row is set to 1.5 relatives to its default height. \documentclass{article} \usepackage[utf8]{inputenc} \slenght{\arrayulewidth}{1mm} \setlength{\tabcolsep}{18pt} \renewcommand {\arraystretch}{1.5} start{document} \start{tabular}{ |p{3cm}| p{3cm}| \hline \multicolumn{3}{|c|} {Country List\ \\hline Name &amp; Author &amp; Publication \\ \hline B1 &amp; A1 &amp; P1 \\ B1 &amp; A1 &amp;&amp; P1 \\ B1 &amp; A1 &amp;&amp; P1 \\ \hline \end{tabular} \end{document} Output code above Change Words to LaTeX now Creates a table is very important when performing with Office or LaTeX because the information in the table is consistent, not verbose. So, in this article, we will discuss how to make a table of different types. Table Creating a regular table Some problems on the regular table Wrap Creates a regular table assuming that we need to create a regular table described as: Then, we have a LaTeX code: \documentclass[15pt, a4paper]{article} \usepackage[british,UKenglish,USenglish,english,american]{babel} \start{document} \start{table}[ht] \caption{Normal Schedule} \centering \start{tabular}{|c|} \hline &amp; Monday &amp; Tuesday Sunday \\ [0.5ex] \hline Morning &amp; \\ \hline Afternoon &amp; \\ \hline \end{tabular} \label{table:nonlin} \end{table} \end{table} With the LaTeX code above, we'll find that: Tables are created in a table environment. \start{table}[where] ... \end{table} where the argument specifies the location allowed for the table and it is a sequence of 0 to 4 letters, each specifying the location where my numerals or tables are placed, as follows: Code Means h Here: in the position in the text where the environment appears. t Top: at the top of the next page. b Bottom: at the bottom of the next page. p Floating Pages: on separate pages that do not contain text, only numerals and tables. The default is a large spoon. If we just define h (here), and it's not appropriate there, it will float to an end. so, it is better to base our options like htp, ... The only thing you can be sure of, however, is that LaTeX will not put frogs before it is referenced in text. But it's possible that it will put a lot of pages AFTER places where you actually put them in .tex site. The content of the table will be written in a tabular environment along with the possible command \caption. \caption{title} means the table title. \centering is used for centralized tables in the page. \start{tabular}{|c|} create a table with four columns and c used to break the contents of the column. Other column formatting symbols are: l: make the content of the odor left desirable r: making the correct column content appropriate Width of the column and the distance between columns is automatically sorted in the table. To create multiple columns in the table, we can be used with c and separate each column with | symbol: \start{tabular}{|c|c|} \hline &amp; Monday &amp; Tuesday &amp; Wednesday &amp; Friday &amp; Saturday &amp; Saturday Sunday \\ [0.5ex] \hline Morning &amp; \\ \hline &amp;Afternoon \\ [1ex] \hline \end{tabular} \hline will sow a single horror line. So, when we want to create multiple lines under the table title, \hline\hline commands are used. [0.5ex] at the end of the title line is used to add an additional vertical distance between the title and the first row of the table. &amp;&amp; the symbol separates a column from the following columns. \\ symbols are used to end the current line. \label[table:nonlin] command can be used with table marker:nonlin. Then \ref{table:nonlin} refers to this table when needed to print the table number in the text. Some problems on the regular table

When we look closely at images on a regular table, we find that the distance between row content and horror lines is very short. It looks so bad. To increase this distance, we can create two commands used to determine the margin between them. \documentclass[15pt, a4paper]{article} ewcommand\Tstrut{\rule{0pt}{2.6ex}} % = ewcommand strut\Bstrut{\rule[-0.9ex]]. {0pt} {0pt}} % = strut 'bottom' \start{document} \start{tabular}}||c|} \hline &amp; Monday &amp; Tuesday &amp; Thursday &amp; Thursday &amp; Thursday &amp; Thursday &amp; Thursday &amp; Saturday &amp;amp; Sunday \Tstrut \\ [0.5ex] \hline Morning &amp;amp; \Tstrut\Bstrut\Bstrut \\ \hline Evening \Bstrut\Bstrut \&amp; \end{document} So, we have the results we want: We will find out about the direction \rule: \rule[height]{width}{thickness} command build the box with height - height above the baseline that raises the box (default on 0), width - width of the box, thickness - thickness of the regulation. The space between the schedule and the window is very small \usepackage{caption} \captionsetup[schedule]{skip=5pt} So, we'll have the desired result: Wrap Up To find out about how to create a regular schedule. A memorandum on how to create or define new commands based on other commands. Refer: Page 2 Content Schedule Given the issue How insertion establishes the Source code When using The Problem of Sanitary Pads We should have a variety, we need to compile this variety followed by increasing the order. In this article, we will use such insertions to address this issue. How the insertion works The idea of such insertion is that by the case that based on the various compiled a[0], ..., a[i - 1], we want to determine the appropriate position of the element [i] to be incorporated into this setting. Normally, we would go backwards from i - 1 index to 0 index. If a[i] &lt;[i - 1], exchange them. Here are some steps to use such insertions with various above. Various origins Apply new elements to the index = 1 into various lengths = 1, from the index = 0. We can find that a new element with a value = 55 is always greater than 44. So, we're not swapping them. Then, our new variety containing both 44, 55 is compiled. Ants a new element on the index = 2 into the length of the array = 2, rather than the index = 0. The new element has a value = 12 that is less than other elements in our new variety. Using the insertion type idea, go backwards from index = 2 to index = 0, compare pair elements, then exchange them. Now, we have our new variety of types: Hide new elements in the index = 3 into various lengths = 3, from the index = 0. Then, we have a variety arranged: Go on to the other elements, we have different origins arranged. The source code Below is some version of the implementation type of insertion. Version 1 static insertion lay invalidSort(int[] nums) { length int = for (int i = 1; i &lt; length; ++i) { for (int j = i; j &gt; 0; --j) { if (nums[j] &lt; nums[j - 1]) { // exchange value between nums[j] and nums[j - 1] tmp int = nums[j]; nums[j] = } Version 2 of the common static void nums) { int length = nums.length; to (int i = 1; i &amp; lt; ++i) { int key = nums[i]; int j = i - 1; // switch elements to the right if num &amp; main [j] while (j &gt;= 0 &amp;keys &amp; keys &amp; nums[j]) { nums[j + 1] = Complexity key in sorts is: Time complexity: Worst case: O(n^2) with various milkings Space complexity: O(1) The type of insertion is a stable sorting algorithm because the arrangement of the same elements is maintained after compiling. When to use When our charity is almost compilation. When our charity has a small size. When we need to sort elements online – that sorts them out as they come in. Because the idea of such insertion is that we should have a variety sort of sorted sort, then put a new element into it. Our new range is still being sorted. Wrapping up an understanding of some versions of sorting out: elements of exchange and transition. Refer to: Page 3 Table content given the problem of How the selection compiles the Source code When using Packaging Given the Problems We should have diverse, we need to sort this variety followed by increasing orders. In this article, we will use sorting selection to address this problem. How the selection type works The idea of the type of selection is that: on the steps of ith, we need to choose the mimium element in various [i], ..., a[n - 1]. Then, feathers all elements from i + 1 to n - 1, compare [i] and [j] with j = i + 1, ..., n, and keep the index a minimum element in a minIndex variable. At the end of the ith loop, we will exchange values between[i] and [minIndex]. Ultimately, we will have a variety sorted. Here are a few steps to describe the selection execution. Original variety At 0th position, choose a[0] because the minimum element of the deceased has a range of between 0 to n - 1. Iterate all elements from 1 to n - 1. Find an index = 6 is a minimum element. Change[0] and [6]. In the first position, select a[1] as the minimum element of the charity has a range of between 1 to n - 1. Iterate all elements from 2 to n - 1. Find an index = 2 is a minimum element. Change a[1] and [2]. Then, we have our variety looking like that: At the 2nd position, choose [2] because the minimum element of the deceased has a range from 2 to n - 1. Iterate all elements from 3 to n - 1. Find an index = 5 is a minimum element. Change[2] and [5]. Then, we have our variety looking like that: At 3rd position, choose [3] because the minimum element of the deceased has a range of between 3 to n - 1. Iterate all elements from 4 to n - 1. Find it's a minimal element, so we don't have to change anything. Then, we have our variety looking like that: On 4th, choose[4] because the minimum element of the charity has a range of between 4 to n - 1. Iterate all elements from 5 to n - 1. Find an index = 6 is a minimum element. Change[4] and [6]. Then, we have our variety looking like that: Keep doing so, we have our final range. Our. public code selection of static cancelSort(int[] nums) { int length = nums.length; for (int i = 0; i &amp; length; ++i) { int minIndex = i; to (int j = i + 1; j &amp; length; ++j) { if (nums[j] &amp; nums[minIndex]) { minIndex = j; } } / swap value in minIndex and i int tmp = nums[minIndex]; nums[minIndex] = nums i]; Complexity of the type of selection: The complexity of time: O(n^2) Complexity of space: O(1) The type of unstable selection compiles the algorithm. When to use When we have a small size. When our charity is not partially compilation. Packing Understands the idea of the type of selection, and how to implement it. Page 4 In this article, we will find something about the beginning of the LaTeX structure. Senarai kandungan Struktur Perintah LaTeX untuk membahagikan dokumen ke bahagian yang lebih kecil Struktur LaTeX Setiap fail LaTeX mengandungi perintah biasa berikut: \dokumenclass[10pt, a4paper]{artikel} \usepackage[utf8]{vietnam} \usepackage{amsmath} \usepackage{amsfonts} \usepackage{amssymb} \usepackage{grafik} \usepackage[kiri=3.00cm, kanan=2.00cm, atas=2.00cm, atas=2.00cm, atas=2.00cm, atas=2.00cm, atas=2.00cm, atas=2.00cm, atas=2.00cm, atas=2.00cm bawah=2.00cm]{geometri} \usepackage{url} \usepackage[colorlinks, urlcolor=black]{hyperref} \start{document} \title{How to use LaTeX} \author{ManhPD} \date{2019-05-04} % Sebaliknya, menggunakan \akan mendapat tarikh \maketitle% Selesai perkara teratas dengan perintah \maketitle. \start{abstract} ... \end{abstract} % Use \renewcommand{\abstractname}{Our title} will change the word Abstract as the title for its abstract. \end{document} Space between \documentclass{...} and \start{document} is called preamble. It will affect the entire document. All of our LaTeX file contents will be written between \start{document} and \end{document}. In layour standards, we will provide in \documentclass[options]{class} with class value and choice. Some class real estate fields. Value Description Articles For articles in scientific journals, presentations, short reports, program documentation, invitations, ... IEEEtran For articles with IEEE Transaction format. Proc Class for proceedings based on class articles. reports For longer reports contain several chapters, booklets, thesis, ... book For real books. slide For slides. This class uses capital letters sans serif. memoir To cleverly change the output of documents. It's based on book class, but we can make any kind of document with it. letterwritten. Beams To write a show. Some optional property fields. Description Value 10pt, 11pt, 12pt, ... Sets the primary font size in the document. If no option is determined, 10pt is assumed. a4paper, letter paper, ... Defines the paper size. The default size is the letter paper; However, many European distribution TeX is now coming for A4, not Mail, and this is also true of all pdfLaTeX distributions. In addition, a5paper, a5paper, executive papers, and legal papers can be determined. fleqn Typesets displays a formula scored on the left instead of being centralized. leqno Puts a formulaic axis on the left rather than the right. title, notitlepage Determine whether a new page should start after the document title or not. Article classes don't start a new page by default, while reports and books do. twocolumn LaTeX instructions to type documents in two columns instead of one. two aside, one by one determines whether two or single-sided output should be generated. Class articles and reports are one side and book classes are double side by default. Note that this option is related to document styles only. The two-part option doesn't tell the printer you're using that it actually needs to make two-sided prints. landscape Changes the layout of documents to print in landscape mode. open, open Create a chapter starting either on the right hand page or on the next available page. This doesn't work with article classes, because it doesn't know about chapters. The report class by default starts a chapter on the next available page and the book class starts it on the right-hand page. The draft makes LaTeX indicate a dashing problem and justification with a small square in the right margin of the trouble line so they can be located quickly by a human being. It also restricts the entry of the image and shows only the frames where it will usually occur. To easily use LaTeX, we will use several packages with different effects. Syntax package is \usepackage[option]{package}. Commands for dividing documents into smaller parts of Some orders that will be used to separate our documents or reports into subparts. \chapter{Introduction} \section{Structure} \subsection{Top Things} \subsubsection{Information Article} LaTeX provides 7 levels to determine parts: Command Level Comment \part{Part} -1 not in letters \chapter{chapter} 0 only books and reports \section {section}{} 1 not in letters \subsections{subsectionsyen} 2 not in letters \subsubsection{subsubsection} 3 not in letters \paragraph{paragraph}4 not in letters \sub-paragraph{sub-paragraph}5 not in the letters \setcounter{secnumdepth}{3} change the depth to the number of the section that occurs. This means that we just want parts, chapters and numbered parts. \setcounter{tocdepth}{3} depth to resust content list. To get an unconnected section that doesn't go into the Table of Contents, follow the command name with an asterisk before the curly opening before: \subsection*{Introduction} When we want an informational part to be in the table of contents, use the unnumberedtoc package. It has \addsec{Introduction}. Refer: page 5When we work with databases, we usually use UI to interact with databases such as MySQL PgAdmin 3, 4, ... But when we want to do something more in-depth with a database like telling people the truth to access our database, what do we do? So, in this article, we'll guide you how to use the command line to interact with the database. To use the command line for MySQL, we have two ways:We will choose the rush command line to do. Windows + R -&gt; cmd This correction appears when the user executes a mysql referral on a default landing rush. The user must execute this directive where the .exe mysql exists. cd \ dir mysqld.exe / s / p It will search our directory and list the directories where mysqld.exe located. After doing the above step, we have mysqld.exe. So, we will turn to this path: cd path_name. Taip mysqld referral to test. Log in to mysql referral online in localhost. If we want to log in mysql database in a remote database, we can do like these steps mysql -u &lt;username&gt; &lt;ip_address&gt;-p-h &lt;port&gt;-P-D &lt;db_name&gt;For example: mysql -u sample -p-h 123.23.45.1 -P 3306 List of all databases Then, we exist: Copyright database COPYRIGHT DATABASE [IF NOT EXIST] database_name [SET AKSARA charset_name] [COLLATE collation_name] For example: CIPTA TESTDB DATABASE; Switch out of the DATABASE DROP DATABASE [IF EXISTENT] database_name; DROP SCHEMA [IF FORM] database_name; For example: DROP DATABASE IF TESTDB FORM; Select a database to perform the List of all schedules in one database List all the schedules in another database showing the schedules in another_database; OR CHOOSE TABLE_NAME INSTEAD of information.schema.TABLES WHERE TABLE_SCHEMA = 'another_database'; Clear SCHEDULE DROP SCHEDULE IF FORM table_name; Get current user information OR OR SELECT users, hos, db, commands FROM information_schema.processlist; So, we have a current root@localhost. Show field or database schedule scheme Use desc command in MySQL Command Online Client. Assuming that we have three tables such as city, country, countrylanguage, we want to see the structure of the city table. We'll do the following image: List the lane names in the database schedule without Formatting the MySQL Start schedule with the -sN: -meaningful sN option: -s, --silent: Quieter. Print results with tabs as separators, each line on a new line. -N, --langkau-lane name: Do not write the name of the lane in the decision. Execute with mysql questions &gt; SELECT column_name INSTEAD of information_schema.lanes WHERE table_schema = 'YOUR_DATABASE_NAME' AND table_name = 'YOUR_TABLE_NAME'; Or CHOOSE column_name THAN WHERE table_schema = 'YOUR_DATABASE_NAME' AND table_name = 'YOUR_TABLE_NAME'; OR we may do with the following directions: SHOW LANES FROM table_name; LIVE LANES FROM database_name.table_name; SHOW LANES FROM TABLE_NAME IN database_name; SHOW THE FULL LANE OF table_name; list all the privileges and some information in this lane. Show all users in MySQL database All user information, hos is stored in mysql.user&lt;/db_name&gt; &lt;/port&gt; &lt;/ip_address&gt; &lt;/username&gt; &lt;/username&gt; So, we can use regular select queries to get all users in MySQL. Before listing all users, we can have a glance at mysql.user table with mysql.user desc command;. Then, we have: SELECT * FROM mysql.user; Or CHOOSE a host, users OF mysql.user; Create a user account in MySQL CREATE a USER_ACCOUNT ACCOUNT IDENTIFIED BY the password; The user_account in 'username'@'hostname' format. The password must be in clear text. MySQL will encrypt the password before saving the user account into the user's schedule. Assuming that we want to create other users, not roots, such as dbadmin, we have: When we use the SHOW GRANT command for dbadmin@localhost; to get all the dbadmin@localhost, we only see THE USE OF GRANTS ON *.* FOR 'dbadmin@localhost'. This means that dbadmin user accounts can only log on to the database server and don't have other privileges. *.* means that the database.table. Execute users to connect from any DBADMIN@'%' host IDENTIFIED BY 'secret'; This means that we allow dbadmin user accounts to connect to database servers from any host. If we want to allow a dbadmin user account to connect from any subdomain host mysql.org, we can use %as follows: CREATE USER dbadmin@'%.mysql.org' IDENTIFIED BY 'secret'; Giving privileges to user accounts The reason why we need to note is that after creating a new user account, users do not have any privileges. So, we need to grant permission for users with GRANT statements. GRANT privileges,[privileges],.. ON privilege_level TO USERS [IDENTIFIED BY password] [TSL_OPTION] [WITH [GRANT_OPTION | resource_option]]; First, determine one or more privileges after the GRANT keyword. If you give users a variety of privileges, each privilege is separated by a comma. (see list of privileges in the table below). Next, determine privilege_level determine the level at which privileges apply. MySQL supports global (.), databases (databases.*), tables (databases.table) and column levels. If you use column privilege levels, you must specify one or list of columns separated by commas after each privilege. Then, put the user you want to provide the privilege. If a user already exists, grant statements modify its privileges. Otherwise, GRANT's statement creates a new user. TheIDENTIFIED BY optional clause allows you to set a new password for the user. After that, you specify whether a user should connect to the database server secure connections such as SSL, X059, etc. Finally, the option with the GRANT OPTION clause allows you to give other users or remove from other users the privileges you have. In addition, you can use the WITH clause to assign the source of the MySQL database server for example, to set how many connections or statements users can use per hour. This is very helpful in shared environments such as MySQL shared hosting. Here are the steps we need to give all the privileges User. Create users in MySQL. CREATE A DBADMIN@LOCALHOST BE IDENTIFIED BY 'secret'; Displays all the privileges assigned to dbadmin@localhost. SHOW GRANTS for dbadmin@localhost; Provide permission for users to give all privileges to dbadmin@localhost users. GIVE EVERYTHING ON *.* TO 'dbadmin'@'localhost' WITH A GRANT OPTION; *.* means dbadmin can access all databases and all objects in the database. WITH THE CHOICE OF GRANTS means that allows dbadmin@localhost to provide privileges to other users. Give all the privileges on a specific database. BLESS ALL IN THE WORLD.* for dbadmin@localhost; Give all the privileges for certain users at any host. GIVE ALL ON *.* TO 'dbadmin'@'127.0.0.1' WITH THE GRANT OPTION; Give certain privileges such as CREATE, SELECT, SILENT, UPDATE, DELETE and DROP ON a specific database. GRANT SELECT, UPDATE, DELETE ON WORLD.* FOR dbadmin@localhost; Suddenly, we want to cancel the privileges given from users. We can do this by using the command: CANCEL [permission type] ON [database name]. [table name] FROM 'non-root'@'localhost'; Finally, we want effective changes to immediately pump out the privileges by typing in the following command: FLUSH PRIVILEGES; Remove users in MySQL Before removing any user from MySQL, we'll need to see mySQL have which user account. CHOOSE a host, user OF mysql.user; Then, we'll remove the account from the dbadmin. DROP USERS [IF THERE EXISTS] userS, ...; THE DROP USER Command removes all privileges from all grant schedules before removing the user account. And we need to keep in mind that when the user account logs in and has an active session running. If you drop a user account, it won't stop the session open. The active session will continue until the user exits. It is important to note that if you do not end the active session, the user removed, if connected to the database server, can still perform all operations until the session ends. Typically, in this case, you need to close the user session immediately before implementing the DROP USER statement. First, you need to identify the user process id using the SHOW PROCESSLIST statement. Secondly, you kill this process by using KILL id_our_session_db. Third, you implement a DROP USER statement to remove your user dbadmin@localhost: ASSIGN users dbadmin@localhost; Import sql files We will use mysql commands to import exported databases and stored as SQL files. First, log in to Second MySQL, create a new database for data from that database creates a database &lt;db-name&gt;Finally, import SQL files in a new mysqlimport database -u &lt;username&gt; &lt;db-name&gt; &lt;&gt; &lt;name-sql-file&gt;-p .sql Export sql files Use mysqldump utilities to export databases &lt;username&gt; &lt;db-name&gt;.sql &gt;. &lt;name-sql-file&gt; List of contents Of Some SQL&lt;/name-sql-file&gt; &lt;/db-name&gt; &lt;/username&gt; &lt;/name-sql-file&gt; &lt;/db-name&gt; &lt;/username&gt; &lt;/db-name&gt; &lt;/db-name&gt; Before jumping into the comparison between MySQL and PostgreSQL, we will read about some sql commands that use: Generally speaking, SQL will contain several commands: DDL - Language Data Definitions It deals with database schema and subject matter, how the data should stay in the database. CIPTA – to create databases and their objects such as (schedules, indexes, views, tavern procedures, functions and originators) CHANGE – change the structure of existing database DROP – mute objects from the TRUNCATE database – remove all records from the schedule, including all spaces reserved for comments issued record - add comments to rename data dictionary - rename DML object - Data Manipulation Language It deals with data manipulation, and includes the most usual SQL facts such as SELECT, INSERT, UPDATE, DELETE and others, and it is used to store, customize, get back,dam and package data now in the database. SELECT – get data from INSERT database – insert data into current schedule package – now pack existing data in DELETE schedule - Turn off all record from MERGE database schedule – UPSERT operation (CALL insert - contact PL/SQL subprogram or Java EXPLAIN PLAN - interpretation of JADUAL LOCK data access pass - DCL concurrent control - Data Control Language It includes commands such as GRANT, and mostly with regard to rights, permissions and other controls of the database system. GRANT - allowing users to access privileges for the REVOKE database - reverses the privilege of user access granted by using the GRANT TCL command - Transaction Control Language It deals with transactions in the database. COMMIT - perform Transaction RollBACK - rollback of transactions in case of any errors that apply SAVEPOINT - to roll back the point of transaction creation in the set of TRANSACTIONS - determine the characteristics for transactions Some eyes to compare between MySQL and PostgreSQL Here are some specific characteristics that we want to compare between MySQL and PostgreSQL. Does not block the operation of DDL DML achievement paragraph Schedule sertai (JOIN) stage separation algorithm transaction procedure Saved procedure and triggers the type of Logic and physical type of function easy replication only if DB Runs out of data type, type exchange, sequence comparison script Instead of blocking DDL operation MySQL Operation Many DDL operations will not be blocked in MySQL than version 5.6. PostgreSQL But with DDL operations such as adding lanes, PostgreSQL will rewrite the table. This means the schedule will be locked, other transactions will not be accessible. But in PostgreSQL, to apply alter schedule to the expense database in a way, we can use the external pg_repack. He you perform REINDEX and some ALTER SCHEDULE OPERATIONS with minimum locking. Achievement paragraph DML SELECT commands Both MySQL and PostgreSQL using SELECT referrals in Way. But usually, when working with a large record, SELECT the command goes by COMMAND by default, so our records need to sort in some orders. MySQL has poor sorting algorithms when compared to PostgreSQL in big data. To dig deeper into the sorting algorithm in MySQL, we can reference sorting MySQL But MySQL is faster than PostgreSQL when we want to get a smaller number of records like getting 10, 100 new data. UPDATE MySQL command has a better performance than PostgreSQL because PostgreSQL will do the following steps: In certain records, it will set the deleted flag. Later, it sowed a new record with data changing. Finally, once the data is inserted into the row in the database, those rows can have one or more of their column values modified through the use of the SQL UPDATE command. To understand some cases of updating data, we can read about article Modifying Lines with UPDATE, Oreilly. But MySQL will directly overwrite the record value with UPDATE instructions. DELETE Instructions MySQL has slower DELETE queries than PostgreSQL. We know that MySQL will create a clustered index based on a number of conditions: When we specify a key on our schedule, the InnoDB storage engine will use it as a clustered index. If the table doesn't have the main key, MySQL will select the first unique index of the table as a clustered index. The table does not have a unique key or index, MySQL will generate a hidden cluster index called GEN_CLUST_INDEX. Then if we want to index other fields that will be accessed frequently, it is called a secondary index, it will contain the key as the value of the node in that second index. Finally, when MySQL deletes the record, first, it needs to delete its record key in the secondary index, then, in the clause index. Continuously, MySQL will sync this data to the disc. It takes a lot of time to do this. However, MySQL corrects it in version 5.5. Asynchronous changes in secondary indexes and clustered indices, and combine changes to disks, working when MySQL servers are idle. Table join (JOIN) algorithm There are three types of tables commonly used in algorithms: Nested Loop Join Hash Join Hash Join Merge Join MySQL basically supports only nested loops participating. This is because MySQL is based on the design philosophy I don't support as many complex algorithms as possible. MySQL was originally used in an embedded system before it was used in web applications. It is necessary to run the Database in disk or memory with the capacity of the small devices are immersed, and it has been designed on the basis of complicated algorithms that drop as much as possible. But PostgreSQL will support three types of joins. If there is a large amount of data to be accompanied, it is better to use a Join or Sort Hash Join. Sort of join accompanying is better if the data is already compiled, otherwise, no, Hash Join re-enclaned. Nested Loop Join is the best option when the accomped table has little data and the other has a large amount of data. Or when the internal table section can use an index scan. Transaction processing level There are four levels of transaction isolation: RECURRING READING It is the most stringent level of isolation. Read the keys and the write locks are obtained. This means that reading block transactions write transactions (but not other reading transactions), and writing transactions blocks all other transactions. This level of isolation does not allow dirty readings or non-repeatable readings. It also doesn't acquire multiple keys, which means it allows the phantom to sound. The read key prevents any write keys from being obtained by other contingent transactions. This level can still have some scalability issues. READ DONE Read the keys obtained and released immediately, and the writing keys are obtained and released at the end of the transaction. This means that reading transactions doesn't block other transactions from accessing lines. However, non-committed writing transactions block all other transactions from accessing the line. Dirty readings are not allowed in this level of isolation, but non-repeatable readings and phantom readings are allowed. By using a combination of context and continuous versions, we can reach repeated READ isolation levels. READ UNLIMITED It is the lowest level of isolation. Changes made by one transaction can be viewed by other transactions before they are made. All types of readings, including dirty readings, are allowed, but do not allow missing updates. This level of isolation is not recommended for use. If uncommitted changes in transactions are relaunched, other transactions incurred may be severely affected. One transaction may not write to the row if another uncommitted transaction has been written to it. Any transaction can read any line, however. This level of isolation can be executed using an exclusive writing key. SERIALIZABLE It is the highest level of isolation. Transactions are carried out on a serial way, one at a time. This level of isolation allows transactions to acquire read keys or write keys for the entire data range it effects. The level of seriALIZABLE isolation prevents dirty readings, repeated readings, and phantoms sound, but it can cause scalability issues for application. Here are some concepts about some phenomena with example is that we have two transactions working on a user's schedule that has several fields - id, name, and age. id name age 1 Joe 20 2 Jill 21 Dirty reads dirty reading occurs when a transaction is allowed to read from lines that have been modified by other running transactions and have not been committed. For example: Transaction 1 Transaction 2 SELECT the age of the user WHERE id = 1; read 20 UPDATE USERS SET age = 21 WHERE id = 1; No SELECT THE AGE OF THE USER WHERE id = 1; read 21 ROLLBACK; it can happen exceptions so that this transaction 2 will roll back We can find that twice the transaction 1 reads, each time the data is different. And finally, transaction 2 will roll back, then our latest reading data will be wrong. Readings cannot be repeated Readings that cannot be repeated when a transaction reads a record twice, and the record conditions vary between the first and second readings. This happens when another transaction updates the record state between the two readings. For example: Transaction 1 Transaction 2 SELECT * FROM THE user WHERE id = 1; USER UPDATE SET age = 21 WHERE id = 1; COMMITMENT; SELECT * FROM THE user WHERE id = 1; COMMITMENT; Transaction 2 is successfully performed, so transaction 1 will see the change, but transaction 1 will see a different value after the query. At the seriAL AND REPEATED READING LEVEL, RDBMS will return the old value for the second option. On READ COMMITTED and READ UNCOMMITTED, RDBMS will restore its latest value. There are two strategies to prevent non-repeatable readings: Using key-based concrete controls On READ isolation mode repeatedly, lines with id = 1 will be locked, thus blocking Transaction 2 until Transaction 1 is performed or rolled back. On READ mode COMMITTED, the second time a query in Transaction 1 occurs, the age will change. Using MVCC - multiversion concrete control When transactions are read on a database, quotes are created, and data is read from quotes. This process isolates data from other concurrent transactions. When a transaction modifies a record, the database creates a new version of a record instead of overwriting the old record. This mechanism provides good performance due to the key dispute between contingent minimized transactions. In fact, the lock contention is deleted between the read lock and the write lock, which means that reading the key never blocks the write key. Most simultaneous databases such as Oracle, MySQL, SQL Server, and PostgreSQL implement MVCC for equality. Back to our example, Transaction 2 is allowed to do in advance, which provides for better concrete. However, Transaction 1, which begins before Transaction 2, must continue to operate on past versions of the database - napshot as it starts. When Transaction 1 finally attempts to do, RDBMS checks whether the decision to make a Transaction 1 is equivalent to the transaction table 1 -&gt; Transaction 2. If it is, then Transaction 1 can continue, If it cannot be seen equivalent, however, Transaction 1 must roll back with a broadcast failure. At the seriALIZABLE level of isolation, both SELECT queries see excerbtions of databases taken on Transaction 1. Therefore, they return the same data. However, if Transaction 2 then try UPDATE that row as well, serial failure will take place and Transaction 1 will be forced to roll back. At the committed level of isolation READ, each query sees a database quote taken at the beginning of each query. Therefore, they each look at different data for updated rows. There are no possible serial failures in this mode (as no serial promise is made), and Transaction 1 does not need to be improved. Phantom reads a phantom reading occurs when a new line is added or issued by another transaction to the record that is being read. This can happen when a range key is not obtained to perform SELECT ... WHERE the operation. For example: Transaction 1 Transaction 2 SELECT * FROM THE user AT WHICH AGE IS BETWEEN 10 AND 30; INSERTED INTO the user (id, name, age) NILAI (3, 'Bob', 27); COMMITMENT; SELECT * FROM USERS WHERE AGES ARE BETWEEN 10 AND 30; COMMITMENT; Transaction 1 performs the same query twice. If the highest level of isolation is maintained, the same set of rows should be returned both times, and indeed that is what is mandated to occur in the database operating at the SQL serial isolation stage. However, at a lower level of isolation, a different set of rows can be returned a second time. In drawALIZABLE segregation mode, Enquiry 1 will cause all records with ages within a range of 10 to 30 locked, therefore Enquiry 2 will block until the first transaction is performed. In RECURRING READ mode, the range will not be locked, allowing records to be entered and the second execution of Query 1 to include a new line in its results. Lost update Two transactions both updated the row and then the second transaction, causing both changes to disappear. This occurs in a system that does not implement any lock-ups. These contingent transactions are not isolated. The problem of a second update is missing a special case of a reading that cannot be repeated. Imagine that two serentus transactions both read in a row, one wrote to him and did, and then the latter wrote to him and did. Changes made by the first author disappear. So, a summary of the readings allowed for various isolations is read. Missing Isolation Level Second Update Lost Dirty Update Read Doesn't Recur Recurring Serial Read Phantom _ _ Recurrence Can Read _ May Occur Read Committed _ _ May Occur Read Uncommitted _ _ _ May occur By default, MySQL uses REPEATED READ isolation Levels. With the level of isolation of this transaction, there is no concern that the data to be read will be changed by other transactions. However, phantom readings may occur. MySQL uses a mechanism called Next Key Lock to avoid This. By default, PostgreSQL uses a COMMITTED level of isolation. In this way, phantom readings and repeatable readings may occur, so need to be careful. In PostgreSQL, although the level of isolation of transactions is converted to RECURRING READING, Next Locking is not taken and phantom readings are prevented by different methods. Therefore, it may be better than MySQL because it is easier to prevent key contention. The procedures stored and triggered PostgreSQL have the advantage that external procedures using Python and others can be used in addition to SQL. But MySQL only supports store procedures in SQL. In MySQL versions 5.6 and earlier, it can only set up to 6 triggers of various each table. Also, since only one BEFORE THE INSERT TRIGGER can be set per table, there are some restrictions. Currently, the number of triggers is no longer limited. However, MySQL only supports triggers FOR EACH LINE without ANY STATEMENTS. The type of logic and physical type of logical replication means that each slave will copy the query and execute it by itself. The physical replication means that each slave will copy a record that changes from the master, then updates the corresponding record. Before MySQL version 5.6, logical replication will be set by default but since version 5.7, physical replication will be charged by default. PostgreSQL will only support physical replication. Simple functions only in DB PostgreSQL PostgreSQL only have suitable features for aggregation, such as window functions that can use aggregate functions to partially cut the set of results and with clauses that can make a subqueries before implementing a SELECT statement. For this reason, PostgreSQL is stronger in the processing of the analytical system. PostgreSQL supports handling map information and geometric data using the PostGIS tool. MySQL With window function, WITH clauses, MySQL will be introduced from version 8.0. MySQL supports parallel queries to take advantage of several CPU to implement inquiries for faster processing. The maintenance of data types, conversion types, comparisons of MySQL Characters in MySQL characters before version 5.6, to loose data type is often a problem. However, since 5.7, it has been fixed, but there are still fewer cases where the bug is caused by the type of data. For example, (int) 1 = (string) '1' = (string) '1Q84' and there are several cases where that type is impliedly changed. For example, if we reject number 1 of the dated 2017-07-01, the 20170700 integer will be returned. MySQL is a case of insensitiveness in comparison strings by default. PostgreSQL In PostgreSQL, users need to handle conversions by themselves. Packing MySQL is suitable for easy web services. It's like getting a set of data and displaying that data. For example, services featuring timeline startups and scroll down to read the next data, such as Twitter, are very for MySQL. PostgreSQL has the greatest advantages as a variety of functions. So it is appropriate for a system where its features can be used. It is often used in analytical systems. In the latest version of MySQL, it gets better and several functions. So the difference between MySQL and PostgreSQL will be deductible. Refer: database_systems) Page 7 Content schedule Given the problem We should have a variety, we need to compile these various followed by increasing tranquility. In this article, we will use the insertion of such a duality to deal with this issue. How the Type of Appeantic Insertion works The Steps of Insertion of The Likeness of The Type of Insertion. But to sow new elements into the composed subarray, we use binary search algorithms to find a position that suits him, instead of advancing all elements backwards from i to 0. Here are some steps that describe the work types of Insertion Of The Two. The spirit of origin of the Ant element in the index i = 1 into the composed subarray has a length = 1, from the position = 0. Use binary search to find a position –&gt; post = 1. switch all that element from the post to the i – 1 to the right by one position. Because the elements in the index = 1 are always satisfied in the various arranged. So, we have our variety: Hide the elements in the index i = 2 into subarrays arranged have a length = 2, from the position = 0. Use the look-up to find a position -&gt; post = 0. switch all that element from the post to the i – 1 to the right by one position. update the value of the elements in the index i = post according to the value of the elements in the index i = 2. The ant element in the index i = 3 into the composed subarray has a length = 3, from the position = 0. Use binary search to find a position –&gt; post = 1. switch all that element from the post to the i – 1 to the right by one position. update the value of the element in the index i = post by the value of the element in the index i = 3 that we store. Continuing with the other elements, we can have a variety arranged. Complexity of The Type of Insertion of The Two: Complexity of the time: O(n^2) Space complexity: O(1) Use The Insertion of The Second Type will reduce the comparison number in the Insertion Type, but the number of exchange elements is not still changing. Lay source code of invalid static dualityInsertionSort (int[] nums) { length int = nums.length; for (int i = 1; i &lt; length; ++i) { key int = nums[i]; enterPosition = findPosition (nums, 0, i - 1, key); to (int j = i - 1; j &gt;= insertedPosition; --j) { nums[j + 1] = nums[j]; } nums[insertposition] = key; } } public static int search (int[] num, int starter, end int, int key) { while (mula &lt;= { int mid = start + (final - start) / 2; if (lock &amp; nums[intermediate]) = final = intermediate - 1; } other = start = intermediate + 1; } } return to start; } When to use When we have a small size. Packing Understands how to apply Binary Search with insertion-type algorithms. Note that our range considered as diverse complimented, so we can use binary search here. Page 8 In this article, we will understand what is streaming, and how to use the flow in Java 8. Usually apply the flow in java 8 makes our code understandable, maintained, ... Let's get started. List of Contents What is Stream in Java 8? Typically, we will use the Collection framework to handle data. Although this framework allows users to handle data efficiently, the main complexity lies in using loops and performs repeated inspections. It also does not facilitate the efficient use of multi-core systems. So, Stream will address this problem. Stream is a series of different elements that have been released over a period of time. Flows are like diverse, but not diverse. They have different differences. The various elements are sorted seamlessly in memory, while the elements in the Stream do not. Each Stream has its beginnings and ends. To understand about the flow, we can give an example: Have you ever sat on the banks of the river or flowed water and put your feet in it? Most of us have at least once enjoyed this peace experience. The water moves around our feet and moves forward. Have you ever observed the same water flowing through your feet twice? Obviously, no! It's the same when it comes to Streams. How Stream works From the image above, we can have some conclusions about how the Stream works. Intermediate operations are lazy because when we call terminal operations, our intermediate operations will be assessed. Each intermediate operation creates a new flow, stores the operation/functionality provided and restores new flows. The time when the terminal operation is called, the flow channel begins and the relevant function is performed one by one. To understand more about Streaming, we can get an example. public invalid examinationLaziLoadOfIntermediateOperations() { List &amp; lt;String&gt; list = Arrays.asList(abc1, abc2, abc3, abc21, abc32, abc13); &lt;String&gt;Stream stream = list.stream().filter (element -&gt; { System.out.println(filter() called + elements map (elements -&gt; { System.out.println(map() called + elements); back elements.toUpperCase(); }); System.out.println (Starting with terminal operations); List &amp; lt;String&gt; lst = strStream.collect (Collectors.toList(); } Then, we have the result of the above example. Starting with a terminal operating filter() called abc1 filter() is called abc2 map() called abc2 filter() called abc3 filter() is called an abc21 filter() called abc32() map called abc32 filter() Abc13 Stream pipeline is a chain operation concept together. The flow pipeline consists of: Sources For example: Collection, variety, generator functions, I/O. Operations Operations This operation can be segregated&amp;lt;/String&gt; &amp; String&gt; Two catgories: The middle operation They restored a new example of Flow itself when it went on. They are always lazy, performing mid-range operations such as filters() do not actually perform any filtering, but rather create a new flow that, when traveled, contains elements of the initial flow corresponding to the given predicate. Traversal pipeline resources do not start until the operation of the pipeline terminal is implemented. They are divided into state and state non-cutting operations. Operations without going to the state, such as filters and maps, retain no circumstances from previously seen elements when processing new elements - each element can be processed independently of operation on other elements. State operations, such as different and sorted, can incorporate conditions from previously seen elements when processing new elements. For example: / / return streams consisting of different elements of this stream &amp; lt;T&gt; different(); / return the stream consisting of these stream elements which corresponds to the given predicate. Stream filter &amp; lt;T&gt; (Predicate &lt;? super= t=?&gt; predicate); / Return of flow consisting of these flow elements, channelled no longer than maximizing length. &amp;Limit lt;T&gt; flow (maximize length); Returns the stream consisting of results using the functionality assigned to these flow elements. &amp;lt;R&gt;Maps&amp;R&gt; &lt;? super= t,?= extends= r=?&gt; Stream (Function Map); Returns a stream that consists of the results replacing each element of this stream with the content of the mapping stream generated by using the mapping function provided to each element. &amp;R&gt;&amp;R&gt; FlatMap Stream &amp; lt;? super= t,?= extends=?&gt; &lt;? extends= r=?&gt; (Functions &gt; maps) / / Return of flows comprising elements of this flow, in addition to performing the actions provided on each element as the elements are consumed from the resulting stream. &amp;T&gt;Spy on streams &lt;? super= t=?&gt; (User Actions); Returns a stream consisting of elements remaining on this stream after removing the first elements of the stream. &amp;T&gt;Skip stream (length n); / Returns a stream consisting of elements of this flow, stacked in natural order. lt;T&gt;Stream sorted(); Restoring streams consisting of these flow elements, compiled by comparison provided. Stream &amp;T&gt; compiled (Comparison); &amp;lt;? super= t=?&gt; Terminal operations It returns results and ends our pipeline. It can target streams to produce yields or side effects. After the operation of the terminal is performed, the flow pipeline is considered to be consumed, and cannot be used again; If need to trace the data source altogether again, we have to go back to the data source to get a new flow. For example: / / returns both all flow elements are matched to the terms of the boolean predicate allMatch &lt;? super= t=?&gt; (Predicate predicate); returns as to whichever flow element is matched to the provided boolean predicate&lt;/T&gt; &lt;/T&gt; &lt;/T&gt; &lt;/T&gt; &lt;/R&gt; &lt;/R&gt; &lt;/R&gt; &lt;/R&gt; &lt;/T&gt; &lt;/T&gt; &lt;/T&gt; &lt;/T&gt; super T&gt; predicate); Back to no element of this flow is commensurate with the predicate provided. boolean noneMatch &lt;? super= t=?&gt; (Predicate predicate); Perform mutable subtraction operations on elements of this flow using Collectors. &lt;R, a=&gt;Collecting (Collector &lt;? super= t,a,r=?&gt; Collector); Perform mutable reduction operations on elements of this flow. &lt;R&gt;Collecting (Supplier&lt;R&gt; Supplier, BiConsumer collector,&lt;R, super= t=&gt; BiConsumer merge);&lt;R, r=&gt; / / returns the approximate length of this flow(); Returns a Selection that describes some flow elements, or An empty Option if the stream is empty. &lt;T&gt;FindAny options(); Returns a Selection that describes the first element of this strim, or Option blank if strim is empty. Options&lt;T&gt; findFirst(); Perform actions for each element of this flow. spinach is invalid (Action &lt;? super= t=?&gt; User); Performs an action for each element of this flow, in the flow meeting order if the flow has a set of meeting commands. &lt;? super= t=?&gt; Subtraction&lt;T&gt; Options (accumulation&lt;T&gt; Dualoperator); Subtract elements of this flow, using the provided identity values and associative collection functions, and returning subtracted values. T subtraction (Identities T, BinaryOperator collection)&lt;T&gt; / / Performs subtractions on these flow elements, using the provided identity, collection and merge functions. &lt;U&gt;U reduce (identity U, BiFunction collection,&lt;U,? super= t,u=&gt; BinaryOperator merge)&lt;U&gt; / / Returns the maximum element of this flow according to the Comparison provided. Maximum choice&lt;T&gt; &lt;? super= t=?&gt; (Comparison); Returns the minimum element of this flow according to the Comparison provided. Min option&lt;T&gt; &lt;? super= t=?&gt; (Comparison); Returns a variety containing elements of this flow. Object[] toArray(); Static method for operation / / Returns the builder for Strim. static Stream.Builder builder(); It embodies a brightly lit flow that elements all &lt;T&gt;&lt;T&gt; elements of the first flow followed by all elements of the second flow. &lt;T&gt;konta Strim static&lt;T&gt; &lt;? extends= t=?&gt; (Strim a, &lt;? extends= t=?&gt; Strim b); Returns a blankjudge Flow. Static flow &lt;T&gt;&lt;T&gt; blank(); Returns the infinite numbered flow in which each element is generated by the supplied Supplier. Static strim &lt;T&gt;generate&lt;T&gt; &lt;T&gt; (Supplier); Returns the infinitely advanced Stream generated by the iterative application of the f function to the seed of the initial element, resulting in a Strim consisting of f(benih), f(f(benih)), dan lain-lain Stream statik &lt;T&gt;&lt;T&gt; iterate (T benih, UnaryOperator&lt;T&gt; f) / / Pulangan sekuel&lt;/T&gt; &lt;/T&gt; &lt;/T&gt; &lt;/T&gt; &lt;/T&gt; &lt;/T&gt; &lt;/T&gt; &lt;/T&gt; &lt;/T&gt; &lt;/T&gt; &lt;/T&gt; &lt;/T&gt; &lt;/T&gt; &lt;/T&gt; &lt;/U&gt; &lt;/U,?&gt; &lt;/U&gt; &lt;/T&gt; &lt;/T&gt; &lt;/T&gt; &lt;/T&gt; &lt;/T&gt; gt; &lt;/T&gt; &lt;/R,&gt; &lt;/R,&gt; &lt;/R&gt; &lt;/R&gt; &lt;/R,&gt; &lt;/R,&gt; &lt;/R,&gt; a flow whose elements are the specified value. &amp; lt;T&gt;Static stream&amp;lt;T&gt; (T... value); Restores seeded streams that contain an element. lt;T&gt;&lt;T&gt; Several ways to create a Collection Stream through the streaming method() and parallel).) use the Collection of Control &amp; lt;Integer&gt; double-brace = ArrayList &amp;&gt; new () ; &amp; Integer&gt;IntStream Stream = collection.stream(); intStream.forEach (items -&gt; System.out.println(items); From various via Arrays.stream (Objects[]). Integer[] ints = {1, 2, 3, 4, 5}; &amp; Integer&gt;Stream stream = Arrays.stream (ints); intStream.forEach (items -&gt; System.out.println(items); From static factory methods in flow classes, such as Stream.of(Objects[]), IntStream.range (int, int) or Stream.iterate (Object, UnaryOperator). usage() static method of Stream&lt;Integer&gt; Stream intStream = Stream.of(1, 2, 3, 4, 5); intStream.forEach (items -&gt; System.out.println(items); //usage range() or multiClosed() that is only used for primitive types: int, double, intStream length = IntStream.range(5, 10); intStream.forEach (items -&gt; System.out.println(items); // use save curve&lt;Integer&gt; Stream.iterate(10, n -&gt; n + 2).limit(10); intStream.forEach (items -&gt; System.out.printl File rows can be obtained from BufferedReader.lines(). String file_path = .\data.txt; Buffered Reader bufferedReader = New Buffered Reader (New InputStream Reader (FileInputStream (file_path)); Stream&amp;lt;String&gt; lineStream = bufferedReader.lines(); lineStream.forEach (line -&gt; System.out.println(line); The file path stream can be obtained from the method in File. Path = Paths.get(./data.txt); &amp; Lt;String&gt;Content stream = Files.lines (passage); &lt;String&gt;Content Stream = Files.lines (route, Charset.forName(UTF-8); contents.forEach (items -&gt; System.out.println(items); Random number flows can be obtained from Random.ints(). Random random = new random(); IntStream intStream = random.ints(10); intStream.forEach (items -&gt; System.out.println(items)); Many methods bear other streams in JDK, including BitSet.stream(), Pattern.splitAsStream (java.lang.CharSequence), and JarFile.stream(). Use the Stream.builder() method Stream.Builder&lt;Employee&gt; empStreamBuilder = Stream.builder(); empStreamBuilder.accept(arrayOfEmps[0]); empStreamBuilder.accept(arrayOfEmps[1]); empStreamBuilder.accept(arrayOfEmps[2]); &lt;Employee&gt;Stream flow = empStreamBuilder.build(); Use the Stream.generate()&amp;lt;String&gt; Stream stream = Stream.generate() -&gt; limit elements).(10); Use line() static Method Java NIO class File String PathFile = ...; Path = Paths.get (pathFile); &amp; Lt;String&gt;StreamOfStrings Stream = Files.lines (route); Stream &amp;String&gt; StreamWithCharset = Files.lines (route, Charset.forName(UTF-8); between Strim and Collections is carefully managed and allows access to items,&lt;/Strings&gt; &lt;/Strings&gt; &lt;/Strings&gt; &lt;/Employee&gt; &lt;/Employee&gt; &lt;/String&gt; &lt;/String&gt; &lt;/String&gt; &lt;/Integer&gt; &lt;/Integer&gt; &lt;/Integer&gt;

&lt;/Integer&gt; &lt;/Integer&gt; &lt;/T&gt; &lt;/T&gt; Streams don't allow direct manipulation or access to elements. The stream does not store data. They only allow passing the elements through the commedation pipeline. The source of the elements in the stream is diverse, list and map. The flow works in nature. This function is used on each element of the flow and produces the result but the source element is not modified. Flow operations are always divided into intermediate operations and terminal operations. Mid-range operations are always lazy. The stream is not contained while the collection can have a limited size. Infinitive elements can be calculated whitin limited using flow. While the calculation of the flow elements is visited only once during life. Elements can be revised in other examples of flows that will be the calculation output on examples of previous flows. Source code To understand more about how the flow runs in Java 8, check the source code on Stream-java-8. Differences between map() and flatMap() signature map() and flatMap() &amp;R&gt;Stream&amp;R&gt; map (Function &amp; lt;? super= t,?= extends= r=?&gt; mapper); &amp;R&gt;&amp;lt;R&gt; FlatMap Stream (Function &amp; lt;? super= t,?= extends=?&gt; &lt;? extends= r=&gt; &gt; map) The intention of each method From the signature map() and flatMap() method: In the map() method, it receives the generic function of the functionality of the interface with two types of T and R. Then it will map each type of T to R. Hence, the type back map() of the Stream &amp;lt;R&gt; For example: Number &amp; lt;Integer&gt; list = {2, 5, 7}; List &amp; lt;Integer&gt; doubleNumbers = numbers.stream() .map (i-&gt; i* 2) .collect(Collectors.toList()) ; In the FlatMap () method, it receives the generic function of the functionality of the interface with two types of T and Stream &amp; lt;? extends= r=?&gt; . This means that we will map every type of T to Stream &amp; lt;? extends= r=?&gt; . Therefore, T is a collection that can change to the flow. The type of flatMap return() method is Stream&amp;R&gt;. For example: List &amp; lt;&gt; &lt;String&gt;&gt; lst = Arrays.asList(Arrays.asList(Bezos, Jeff), Arrays.asList(Gates, Bill), Arrays.asList(Ma, Jack); List &amp; lt;String&gt; namesFlatStream = lst.stream() .flatMap (Collection::stream) .collect(Collectors.toList); Packing Stream represents the sequence of objects from the source, which supports aggregate operation. Refer to: Java 8 Stream under Reactive hood programming with Java 9 Some interesting ways to use Java 8 Stream Page 9 Python was created by Guido van Rossum in 1991 and was awakened by the Python Software Foundation. It&lt;/String&gt; &lt;/String&gt; &lt;/R&gt; &lt;/Integer&gt; &lt;/Integer&gt; &lt;/R&gt; &lt;/R&gt; &lt;/R&gt; &lt;/R&gt; &lt;/R&gt; especially enhanced for emphasis on code readability, and syntax allows programmers to express concepts in fewer lines of code. So, nowadays, Python can be programmed in many applications such as: Web development: Web framework Django, Flask. Data Learning Machine Analysis Script Game embedded Applications Desktop Thus, Using Python will always face many common problems, and some tricks. In this article, we will talk about some of the problems we need to know. Table of contents Incorporates two rotarys into the dictionary We can use the following ways: key = ('name', 'age', 'food' value) = ('Bill Gate', '60', 'Hamburger') map = dict (zip (key, value)) or t = ((1, 'a'), (2, 'b')) map = dict((y, x) for x, y in t) # OR map = dict (reversed, t)) Checklist is invalid if not a: prints ('Blank list.') # OR if len(a) == 0: prints('Blank list.') # OR if a =prints '') # OR if a == print ('Blank list.') # OR if a =') Two-variable exchange value Get input from the command line name = raw_input('What is your name?') number = int(raw_input('Number of children: ')) Variables receiving data from raw_input() method method of having a string data type. So, we need to convert it to use it. Loop in Python for loops for x in range (0, 3): print (Value x is: + x) # OR to x in range (1, 10): for y in range(1, 10): print ('%d * %d = %(x, y, x * y)) while loop x = 1 while True: if x &gt; 10: break x += 1 Loop with president index = [Washington, Adams, Jefferson, Jefferson, Madison, Monroe, Jackson] for i in range (len (president): print (President {}: {}.format(i + 1, president[i])) # OR use enumerate to num, name in enumerate (president, start = 1): print (President {}: {}.format (num, name)) The enumerate function creates a table in which each element is a tuple containing the index of the item and the value of the original item. Starters = 1 option to bite is optional. By default, it will start to count at 0. This function will complete the task: Access each item in the list (or another can be moved). Get an index of each item you reach. Loop over multiple lists at the same time -&gt; Use zip color = [red, green, blue, purple ratio] = [0.2, 0.3, 0.1, 0.4] for color, ratio in zip (color, ratio): print ({}% {}.format (ratio * 100, color)) Notes about range and xrange: In Python 2.x, we can use both But at Python 3, we only use the range. In Python 2.x, range() returns a list of numbers -&gt; So, the range returns the list object. For Python 3, the range returns the object range. xrange() generator objects that can be used to display numbers only with loops. Only a certain range is displayed on demand and therefore called lazy ratings -&gt; So, xrange restores xrange objects. xrange uses less memory, and should be to exit the initial loop, no need to waste time creating unused numbers. This effect is small on the smaller list, but quickly on the larger list. –&gt; faster if forwarding the same sequence multiple times. –&gt; xrange needs to rebuild integer objects every time, but the range will have real integer objects. Change the dynamic Python object to JSON json.dumps (data, default = bid o: o.__dict__) Reversing a string of = 'abc' string = str[::-1] Get common elements in two sets s1= {4, 5, 7, 6} s2 = {1, 2, 4, 5, 6} s_common = s1.intersection(s2) Get the difference between two sets s1= {4, 5, 7, 6} s2 = {1, 2, 4, 5, 6} s_differ = s1.difference(s2) Get a combined set of two different sets s1= {4, 5, 7, 6} s2 = {1, 2, 4, 5, 6} s_union = s1.union(s2) Pass the unknown argument def func(*args): return first_arg func (first_arg) func (first_arg, second_arg) func (first_arg, second_arg, third_arg) Working with the All information module in this section referred to from this link. # Let's say this foo.py. print(before import) import mathematical prints (before functionA) def functionA(): print (Function A) prints (before functionB) def functionB(): prints (Function B {}.format (math.sqrt(100) prints (previously __name__ controller) if __name__ == '__main__': functionA() functionB() prints (after controller __name__) Whenever the Python interpreter reads the source file, it does two things: It sets several special variables such as __name__, and then He executed all the codes available in this file. When your module is the main program If you run your module (source file) as the main program, for example the Interpreter will assign a hard string of __main__ coded to the __name__ variable, which is # It's as if the interpreter sows this at the top # your module when running as the main program. __name__ = __main__ When your module is imported by another Instead, say some other modules are the main programs and it imports your modules. This means that there are statements like this in the main program, or in some other modules import major programs: # Say this is in some other major program. import foo In this case, the interpreter will see the file name of your module, foo.py, release the .py, and assign that the string to the variable __name__ of your module, namely # It's as if the interpreter sows this at the top #your module when it's imported from another module. __name__ = foo Implement module code After special variables are provided, the interpreter executes all the codes in the module, a statement at a time. You may want to open another window on the side with a code sample so you can follow along with this explanation. Always In print strings before importing (without quotes). It loads the mathematical module and assigns it to a variable called mathematics. This is equivalent to replacing import mathematics with the (note that __import is a low-level function in Python that takes a string and triggers real imports). # Search and load modules given the name of its strings, mathematics, mathematics, then intended for local changers called mathematics = __import__ (matematic) It prints a sequence before functionA. It executes a def block, creates a function object, then objects that function to a changer called functionA. It prints a sequence before the functionB. It executes a def block, realizes another function object, then places the function object to a changer called functionB. He scored a barrage before __name__ guard. Only when your module is the main program If your module is the main program, then it will see that the __name__ is indeed assigned to the __main__ and it calls two functions, printing the sequence of Function A and Function B 10.0. Only if your module is imported by another If your module is not the main program but is imported by another, then the __name__ will be foo, not __main__, and it will pass the body if the statement. It's always going to be a __name__ after both situations. Wrap Referencing: Page 10 Content List Looking at the problem Using the hardness of using wrapping binary search Given the problem Given the various num integers arranged in ascending order, looking for the starting position and ending the given goal value. The complexity of your algorithm's street time must be in the O(log n) array. If the target is not found in various, return [-1, -1]. Example 1: Input: num = [5,7,7,8,8,10], target = 8 Output: [3,4] Example 2: Input: nums = [5,7,7,8,8,10], target = 6 Output: [-1,-1] Using the usual hardness way, we need to find the first and last position of the target value in various ways. So to find them, we can use a linear search for two case: To find the first position, search from left to right. To find the last position, search from right to left. If we face the target value for the first time, stop processing. Here is the source code for resolving this violence. int lay[] searchRange(int[] nums, target int) { int lower = lowerBound (nums, target); int upper = upperBound (nums, target); return new int[]{bottom, top}; } lowerBound personal int (int[] nums, int target) { int res = -1; for (int i = 0; i &lt; nums.length; ++i) { if (nums[i] == target) { res = i; break; } } semula; } int personal upperBound (int[] nums, int target) { int res = -1; to (int i = nums.length - 1; i &gt;= 0; --i) { if (nums[i] == target) { res = i; rest; } back again; } Complexity of this solution: Complexity of time: O(n) Space complexity: O(1) Using binary search Before reading about the source code, we may refer to the article How to use binary search to answer questions template I, II, III binary search. Using template I of Binary Search public int[] searchRange(int[] nums, int target) { int lower = search (num, target, fake); top int = search (num, (num, correct); returns a new int[]{bottom, top}; } personal int search (int[] num, target int, boolean isUpperBound) { left int = 0; int right = nums.length - 1; int res = -1; whereas (left &lt;= right) { int mid = left + (right - left)/2; if (nums[mid] == target) { res = mid; if (isUpperBound) { left = middle + 1; } other { right = middle - 1; } other if (nums[mid] target &lt;) { left = middle + 1; } other { right = middle - 1; } res back} } Using template II of the ''java duality search' (int[] nums, target int, boolean isLowerBound) { left int = 0; int right = nums.length; while (left &lt; right) { int mid = left + (right - left) / 2; if (nums[mid] &gt; || (isLowerBound &amp;amp; target == nums[mid])) { right = mid; } other { left = middle + 1; } back lo; } int lay[] searchRange (int[] nums, target int) { int[] targetRange = {-1, -1}; int leftIdx = extremeInsertionIndex (nums, target, true); if (leftIdx == nums.length || nums[leftIdx] != target) { return targetRange; } targetRange[0] = leftIdx; targetRange[1] = extremeInsertionIndex (nums, target, false) - 1; targetRange return; } '' Complexity of this solution: Complexity of space complexity: O(1). Wraps Understanding how to use multiple Look-a-Half templates. Page 11 In this article, we'll find out something about the complexity of Lists, Sets, Rows and Maps in the Java collection. It is useful because it helps us improve the time of our program. Let's get started. Add Out List Contains ArrayList Data Structure O(1) O(n) O(1) O(n) Array LinkedList O(1) O(1) O(n) O(n) Related List CopyOnWriteArrayList O(n) O(n) Array Set Add Contains Next Data Structure Hash O(1) O(1) O(1) O(1) O(1) h/n) LinkedHashSet O(1) O(1) O(1) O(1) Hash Schedule + EnumSet Related List O(1) O(1) Bit Vector TreeSet O(logn) O(logn) O(logn) Red-Black Tree CopyOnWriteArraySet O(n) O(n) O(1) Concurrent ArraySkipList O(logn) O(logn) O(1) List of Rarity Beratur Peak Bid Size Data Priority O(logn) O(1) O(logn) O(1) Previous Heap LinkedList O(1) O(1) O(1) O(1) O(1) Array ArrayDequeue O(1) Array ArrayDequeue O(1) 1) O(1) O(1) O(1) Related List ConcurrentLinkedQueue O(1) O(1) O(1) O(n) Array Related ListBlockingQueue O(1) O(1) O(1) O(1) Array PriorityBlockingQueue O(logn) O(1) O(logn) O(1) Primacy Heap SynchronousQueue O(1) O(1) O(1) No DelayQueue O(logn) O(1) O(logn) O (1) Heap LinkedBlockingQueue O(1) O(1) O(1) O(1) Map Related List Get Contains Data Structure Next HashMap O(1) O(1) O(h/n) LinkedHashMap O(1) O(1) O(1) Hash Schedule + IdentityHashMap Related List O(1) O(1) O(h/n) WeakHashMap O(1) Array1) O(1) O(h/n) Hash EnumMap O(1) O(1) O(1) O(1) TreeMap O(logn) O(logn) O(logn) Red-Black Staple Table O(1) O(1) O(h/n) Concurrent Schedule HashSkipListMap O(logn) O(logn) O(1) Rarity List page 12 Content Schedules View Problems Using preset algorithm When using Pad Pads Given the problem we should have such a variety: int[] nums = {3, 4, 2, 6, 8, 9} We need to think of the number of subarrays from: Using the hardness algorithm the usual way to deal with it is that we will change all elements from i index to j index. Then, we'll figure out the number of these subarrays. Here is the source code of this algorithm. cruel lay static BruteForceSumSubarray(int[] nums, int start, int end) { if (nums == cancel) { return 0; } number of int = 0; for (int i = start; i &lt;= end; ++i) { number += nums[i]; When we have the question m, the complexity of the time of this algorithm: The complexity of the time: O(n * m), n is the size of the complexity of the array space: O(1) Using the idea prefix sum technique prefix algorithm is that it explains the way to pre-count the cumulative amount for each value in the sequence. So it can be used later for a faster calculation than the number between the indexes given. We should have such a variety: int[] nums = {3, 4, 2, 6, 8, 9} Our problem is that we need to think of new various prefixes that meet several properties: prefixSum[0] = numsum[0] prefixSum[1] = prefixSum[0] + numsum[1] prefixSum[2] = prefixSum[i] + numsum[2] prefixSum[i] = prefixSum[i - 1] + nums[i] Here is the source code of the initial algorithm. main invalid static lay (String[] args) { int[] nums = {3, 4, 2, 6, 8, 9}; int[] prefixSum = new int[nums.length]; calculatePrefixSum (nums, prefixSum); IntStream.of(prefixSum).forEach (item -&gt; System.out.print(item + --&gt;); System.out.println(cancel); } lay static void thinksPrefixSum (int[] num, int[] prefixSum) { if (nums == || prefix == cancel) { return; } length int = nums.length; if (length == 0) { return; } prefixSum[0] = nums[0]; for (in i = 1; i &lt; length; ++i) { prefix[i] = prefixSum[i - 1] + nums[i]; } } int statik awam sumSubarrayWithPrefixSum (int[] prefixSum, beginning int, end int) { int earlierSum = start == 0 ? 0 : prefixSum[start - 1]; return prefixSum[end] - formerSum; } Complexity of this algorithm: Complexity of time: O(n + m) Space complexity: O(n) When to use When we have a variety of questions for a variety of questions for our variety. Wrapping this prececap algorithm is used in type calculations. Refer: guyb/papers/Ble93.pdf Page 13 In this article, we will dive into the art of MVC building, to see how it works,... Because so many frameworks use it, understanding mvc patterns will help you work with them with confidence. Let's get started. A list of Content Given Problems Back in the '70s, GUI apps or desktop apps were popular. Typically, they have two main responsibilities: Arrange the screen: determining the order of the on the screen, along with their hierarchy structures with each other. Logic: behavior that cannot be easily programmed into the controls themselves. So, View Views Logic will always be strict couplings. We always have to take care of everything when we change the controls in The Display. View and Logic do not develop parallels. The problem of Analysis of the root problem is that views and logic are always tight couplings. So, we need to separate between the Views and Logic sections. It's called a Separate Presentation. The idea behind a separate presentation is to make a clear division between domain objects that model our perception of the real world, and a presentation object that is an element of the GUI we see on screen. So, the presentation section is made of two remaining elements: View and Guard. Finally, the logical or relavant part to the domain element is referred to as model. –&gt; MVC was born. Definition of MVC Pattern According to the MVC pattern in wikipedia.com, we have its definition: Model-View-Controller (commonly known as MVC) is an architectural pattern commonly used for user interfaces that divide applications into three interconnected parts. This is done to separate internal representation of information from the way information is presented and received from users. The MVC design pattern devests these key components that allow for the reuse of parallel codes and developments. Central model of the pattern. It is a dynamic data structure of the application, free of the user interface. It directly manages data, logic and application rules. This model doesn't know anything about Views and Controllers. See App presentations that users can interact with. In some MVC variations, View doesn't interact directly with models. But originally, MVC used the Observer patterns to learn all the changes from the Model to update the View section. This means that this section is used to receive events from view, and will perform all actions to give data to the Model. And the Controller will also take all modifications from the Model, then create some updates to View. This pattern was originally designed by Trygve Reenskaug while he was working at Smalltalk-80 (1979) where it was initially called Model - View - Controller. MVC continues to be described in more in-depth design patterns of 1995: Reusable Object Oriented Software Elements, which play a role in popularizing its use. Here's an image about MVC patterns: Handsome lines represent poorly typed aggregation and solid lines are highly typed aggregation. The model retains the pointer to View, which allows it to send weakly typed change notifications. Since it is a weak type relationship, the Model references views only through the basic class that allows it to send notifications to Instead, Views knows what kind of model it observers are. It has a very typed pointer to the model enables it to call any model function. The view also has a poor relationship typed with the controller. The display is not tied to a specific type of controller, which means that different types of controllers can be used with the same View. The controller has an indicator to both Model and View, knows the type of both. Because the Controller defines behavior, it needs to know the types of Models and Displays to translate users' input into app responses. All of the above content talks about traditional MVC patterns. Now, we'll see the MVC pattern can now have any changes when compared to traditional MVC patterns. We can see that Display and Models are not related together. All actions between them must pass through the Guard. When to use the App requires asynchronous communication on the back. Apps have functions that results don't need to relocate a full page, for example, commenting on posts while using Facebook or scrolling infinitively. Data manipulation is mostly on the client's side rather than the server section. The same type of data is being transmitted in different ways on a single page. When an app has many insane connections used to modify data (buttons, switches). Benefits &amp;;; Benefits of WeaknessEs The faster development process Multiple developers can work simultaneously on models, controllers and views. Applications developed using MVC can be three times faster than applications developed using other development patterns. MVC enables the logical groups of relevant actions on the controller together. Views for specific models are also group together. The ability to provide multiple view models can have multiple views. Code overlap is very limited in MVC because it separates business data and logic from the display. Support for MVC asynchronous techniques also supports asynchronous techniques, which help developers to develop very fast loading applications. The MVC model returns data without formatting the MVC pattern of returning data without using any formatting. So the same components can be used and called for use with any interface. In some frameworks that use MVC patterns such as Spring, ..., it will use Front Guard patterns. The Future Controller Pattern will handle multiple incoming requests using a single interface (controller). The Front Guard provides centralized control. We need to configure only one controller on a web server instead of a lot. The Front Guard provides rich communication support to design our web applications. Weakness Increased complexity. Inefficiency of data access Display. Reduce security because the model can be searched in View. In MVC, Display and Model patterns can interact with each other based on Observer patterns. So, this means that we usually take some data logic into the Display. So, testing is really difficult when we don't know deep logic data. Data. Python Source Code on MVC patterns, we can refer to this link &amp; Examples Nowadays, MVC patterns are mostly used in web applications. This model is a module that interacts with the database (in the simplest design, this can be directly the library used for database queries using SQL.) The display is a module that generates HTML from the data. The controller contains all other functions of the server (for example: it decides which page to display, generate dynamic content, handle sessions and cookie data, ...) Wrapping up the GoF does not refer to MVC as a design pattern, but considers it a set of classes to build a user interface. On their view, it's actually a variation of three classic design patterns: Observer patterns, Strategy patterns, and Composite patterns. Depending on how MVC has been implemented within the framework, it can also use Factory and Template patterns. Views and controllers have slightly different relationships. The controller makes it easier for Views to respond to different user inputs and is an example of a Strategy pattern. Both links between View and Controller, View and Model are many-on-one. The view is registered to get updates or receive notifications from models based on Observer patterns. Refer: The MVC pattern writer explains it trygver/themes/mvc/mvc-index.html In multiple controllers in the MVC Principles and Practices pattern matthewan/traditional-mvc-and-mvc-in-ios-development-2280d353b459 When the MVC pattern does not use Page 14 Interpolation binding It refers to binding expressions into marked languages. app.component.ts import { Components } from '@angular/core'; @Component({ selector: 'app-example', template: ' &lt;div&gt; '' &amp; lt;/div&gt;' }) export class AppComponent author {Name = 'Dan Brown'; } Property binders Used to set view elements with the expression value of the templates stemming from the Components attribute. When we want to tie up See the nature of the element, we must find or examine this nature is that element correctly. app.component.ts import { Component } instead of '@angular/terrace'; @Component({ selector: 'app-example', template: '&lt;input type='text' [disabled]='isDisabled' minlength=4 required=&gt;' }) appcomponent class export { isDisabled = fake; } Here's something we need to avoid when tying treasures: Attributes It is used to define the attribute properties of the See element. Attribute ties are mostly used where we have no view of the wih treasure respecting the attributes of html elements. For example: &lt;table&gt;&lt;tr&gt;&lt;td colspan='4'&gt;&lt;/td&gt;&lt;/tr&gt;&lt;/table&gt; The above command will discard the template correction for errors: It cannot bind 'colspan' because it is not a known original trait. Syntax attribute binds: [attr.attribute-name]='expression'attribute-name – the name of the attribute we want the expression to be – it will be graded to the value for the attribute name. For example: // app.component.ts import { Component } instead of '@angular/terrace'; @Component({ selector: 'app-example', template: ' &lt;table&gt;&lt;tr&gt;&lt;td [attr.colspan]='4'&gt;&lt;/td&gt;&lt;/tr&gt;&lt;/table&gt; '}) appcomponent class export { isDisabled = fake; } When working with binding attributes, we have a question about the difference between HTML attributes and DOM treasures. Here's an explosion about the nature of the DOM and the nature of HTML. We can refer to the angular.io. When writing html source code, you can specify attributes on your HTML elements. Then, once the sailor has broken your cod, a suitable DOM nod will be created. This nod is an object, and therefore it has properties. For example, this HTML element: &lt;input type=text value=Name:&gt; has 2 attributes (type and value). Once the browser has broken this code, the HTMLInputElement object will be created, and the object will contain dozens of assets such as: receive, accessKey, inline, alt, attribute, autofocus, baseURI, checked, childElementCount, childNodes, children, classList, className, clientHeight, etc. For a particular DOM nod object, properties are the nature of that object, and attributes are elements of the nature of that object's nature. When a DOM nod is created for a given HTML element, many of its properties relate to attributes with the same or similar name, but it is not a relationship with each other. For example, for this HTML element: &lt;input id=the-input type=text value=Name:&gt; A matching DOM Nod would have the id, type, and value properties (among others): The nature of the id is the trait indicated for the id attribute: Obtaining the treasure reads the attribute value, and sets the write attribute value trait. id is the true nature indicated, it does not customize or limit the value. Types of properties properties indicated for attribute type: type: the nature of reading attribute values, and specifying the writing properties of attribute values. type is not a genuine trait reflected because it is limited to a known value (for example, a valid type of input). If you have &lt;input type=foo&gt;, then theInput.getAttribute(type) gives you foo but type Input gives you text. On the contrary, the nature of the value does not reflect the attribute of the value. On the contrary, it is the current value of input. If the user changes the value of the input box manually, the nature of the value reflects this change. Therefore, if the user enters John in the input box, then: theInput.value // returns John while: theInput.getAttribute('value') / / returns Name: The nature of the value reflects the current text content in the input box, while the value attribute contains the initial text content of the value attribute. So, if you want to know what's inside the text box, read its nature. However, if you want to know what the initial value of the text box is, read the attributes. Or you can use the DefaultValue property, which is a pure description of the value attribute: theInput.value // returns John theInput.getAttribute('value') // returns Name: theInput.defaultValue // returns Name: There are several properties that reflect their attributes directly (rel, ps), there are direct reflections with slightly different names (htmlFor reflecting attributes, className reflects class attributes), many reflect their attributes but with restrictions/customizations (src, href, lack of effort, a lot), and so on. These specifications include various types of reflections. Class ties It is used to define the class properties of The View element with CSS classes. If we use javascript for this function, we will use removeClass() or addClass() dynamically. Syntax: [class.className]='expression class' - the nature of the View element. className - then the name of the class to which we want to invoke this element. expression – it will be graded to true or false to determine whether classes need to be used. For example: &lt;div [class.alert-danger]='isDanger'&gt; ... &lt;/div&gt; When we use class.className in our gut, it uses only one class name for the View element. So, if we're going to ask him for a class name. What are we going to do? –&gt; ngClass directions will be used in this case. ngClass must accept objects with class names as keys and expressions that rate true or false as values. For example: // app.component.ts import { Component } instead of '@angular/terrace'; @Component({ selector: 'app-example', template: ' &lt;div [ngclass]='classes'&gt; ... &lt;/div&gt;&lt;div[ngclass]='setClasses()'&gt; ... &lt;/div&gt; ' }) export class AppComponent { ... class = { warning-danger: ini.isDanger, inactive: !this.isActive, ... }; setClasses() { let the class = { ini.isDanger, inactive: !ini.isActive, ... }; back back } } He style binding is used to define the exposure element style. Sometimes, we want to assign treasures that have units like em, px, % or brakes. &lt;button [style.width.px]='120'&gt;Layari&lt;/button&gt; &lt;button [style.font-size.em]=isDanger ? '20' : '10'&gt;Guard&lt;/button&gt; / / app.component.ts import { Component } from '@angular/terrace'; @Component({ selector: 'app-example', template: '&lt;div [style.color]='color'&gt;&lt;/div&gt;' }) export AppComponent class { color = '#333'; authorName = 'Dan Brown'; } Like class ties, we also want to assign a different style to the View element, we can use the ngStyle direction to do so. app.component.ts import { Component } instead of '@angular/terrace'; @Component({ selector: 'app-example', template: &lt;button [ngstyle]='multipleStyles'&gt;'Click me!&lt;/button&gt; &lt;button [ngstyle]='getStyles()'&gt;Cancel&lt;/button&gt; '}) export AppComponent { multipleStyles class = { 'background color': 'red', 'background color': 'white', 'font size': '20px', 'width': '120px', 'height': '30px' } getStyles() { 'background color': 'white', '30px' } getsStyles() { 'background color': 'white', 'white', 'white', '30px' } getStyles() { 'background color': 'white', 'white', '30px' } getStyles() { 'background color': 'white', 'white', 'white', '30px' } getStyles() { 'background color': 'white', 'white', '30px' } getStyles() { 'background color': 'white', 'white', '30px' } getStyles() { 'background color': 'white', 'white', '30px' } getStyles() { 'background color': 'white', 'white', '30px' } getStyles() { 'background color': 'white', 'white', '30px' } getStyles() { 'background color': 'white', 'white', '30px' } getStyles() { 'background color': 'white white', '30px' } getStyles() { 'background color': 'white', 'white', '30px' } gotStyles() { 'background color': 'white', 'white', '30px' } getStyles() { 'background color': 'white', 'white', '30px ' } getStyles() { 'background color': 'white'' background color': 'cyan', 'font-size': '20px', 'width': '120px', 'height': '30px' } } Page 15 Before moving on this article about the custom two ways of binding, we can read on the binding data in angles. Then, we'll dive into the custom of two ways of tying in the Corner, and understand about the problem of two ways of binding, how to reduce it. Let's get started. List of Custom content two ways to bind Now, we will create a project on the custom of two ties with the Angular CLI, measuring the customization of the counter. If we haven't installed the Angular CLI yet, we can use the directions below: npm install -g @angular / cli Next, create our own project: ng new-two-hala-binding --scss style --logging Because we want to use SCSS processing for CSS, so, we'll use additional parameters like -scss style Then, we can use --logging to navigate to other pages. After that, we create new components such as: Fill in all the kods below to look like this. &lt;!-- custom-counter.component.html --&gt;&lt;div class=content&gt;&lt;button(click)=decrement()&gt;-&lt;/button&gt; &lt;span class=content-number&gt;&lt;/span&gt; &lt;button (click)=increment()&gt;+&lt;/button&gt;&lt;&lt;/div&gt; .content { border: solid 1px white; margin: 40px; .content-number { color: dark; margin: 0 15px; } import { Components, OnInit, Input, Output, EventEmitter } from '@angular/core'; @Component({ selector: 'app-custom-counter', templateUrl: './custom-counter.component.html', styleUrls: ['./custom-counter.component.scss'] }) exporting customCounterComponent classes perform onInit { counterValue = 0; @Input() get counter () return } @Output() counterChange = new eventEmitter(); beginner() { } ngOnInit() { } counter set (val) { this.counterValue = val; this.counterChange.emit (this.counterValue); } decrement() { --this.counterValue= --this.counterValue= } increments() { ++this.counterValue; this.counterChange.emit (this.counterValue); } } The code above is customCounterComponent code. To perform two binding methods, we will use @Input() and EventEmitter to do so. When we change the counter variableValue, we must also shoot a change event to tell the parent component that contains a child component - CustomCounterComponent. Continuously, we will see the source code in app.component.ts and app.component.html. import { Components } from '@angular/core'; @Component({ selector: 'app-root', templateUrl: './app.component.html', styleUrls: ['./app.component.scss'] }) export appComponent class { value = 0; } &amp;app-custom-counter [(counter)]='value'&gt;&lt;/app-custom-counter&gt;&amp;lt;p&gt;Counter values are &lt;/p&gt; So, we can find that appComponent value variables will bind the counter properties to get/set customCounterComponent. So, when the counter is changed by something, it will be reflected in appComponent values. The source code for this sample here: @Input() It will be used to indicate this variable that will be approved data from the parent component. @Output() and EventEmitter It is used to know that the tasks in the components of the child will update the values in the parent component. Binding data bilateral problems Before researching the problem of binding bilateral data, we need to understand the mechanisms of decree change in Angular and AngularJS. Because the decline in change is the mechanism responsible for binding data in the Angle. The first thing is to be aware of the structure of the Angular tree. The Angular app can be viewed as a component tree. The components have displays and models. Each component has its own change detection, allowing each one to address changes in different ways. Detection of changes will lubricate from the root of the tree to the leaves. This means that the root of the first application is checked and then his siblings, their children will be processed. So, when we have so many components, the detection of change will work hard. It takes so much time, this means that the system's performance will break down when they need to check the loops for the creation of change detection, especially cases binding bilateral data. Some change Detection Mechanism strategies How the Change Detection Mechanism works? ChangeDetectionStrategy.Default Anytime data is mutated or changed, Angle will carry out change detection to update the DOM element. ChangeDetectionStrategy.OnPush Angular will only carry out change detection when new references are submitted to @Input() data, rather than some changes properties in the object. Use If observed submitted to the onPush change detection strategy in a enabled component, then angle change detection should be called manually to update the DOM element. how to bind the First Way, to avoid the deterioration of application performance, we can use the strategy ChangeDetectionStrategy.OnPush to only run when the changer is referred to a new referral. –&gt; Use objects that are inevitable with ChangePush typing to improve achievement. child.component.ts import { Component, Input, ChangeDetectionStrategy } instead of '@angular/terrace'; @Component({ voter: 'app-child', changeDetection: ChangeDetectionStrategy.OnPush, template: }) export ChildComponent class { @Input() course: everywhere; parent.component.ts import { Component } instead of '@angular/terrace'; @Component({ voter: 'parent-app', template: &lt;app-child [course]='data'&gt;&lt;/app-child&gt; '}) exporting ParentComponent classes implementing OnInit { courses: everywhere; ngOnInit() { this.course = { header: 'Learning Angles from scratch', code: Angular001 } } } } Second way We can use RxJS Observable to improve application performance as they issue new values without changing the object of reference. child.component.ts import { Component, Input } from the course '@angular/core' @Component({ selector: 'app-child', template: }) ChildComponent class export implements OnInit { @Input() Course :&lt;any&gt;Note; _data; builder (private changeDetectorRef: ChangeDetectorRef) { // nothing to do } ngOnInit() { this.course.subscribe(data=&gt; { this._data = data; // Manual calls this Change Typing Mechanism.changeDetectorRef.markForCheck(); } parent.component.ts import { Component, OnInit } instead of '@angular/teras'; import { BehaviorSubject } instead of 'rxjs/BehaviorSubject'; @Component({ selector: 'app-parent', template: &lt;app-child [course]=data&gt;&lt;/app-child&gt; &lt;button type=button(click)=onClick()&gt;'Click me!&lt;/button&gt; '}) export parentcomponent class execute OnInit { course: everywhere; data: BehaviorSubject; ngOnInit({ this.course = { header: 'Learning Angles from scratch', code: Angular001 }; this.data = new BehaviorSubject (ini.course); } onClick() { this.course = { header: 'C++ speech', code: 'C++001' }; this.data.next(this.course); } Wrapping AngularJS supports two hala data binders, but Angular does not support tying two more hala. [(ngModel)] is not a two-hala data bond, it is simply a symbol of the combination of the bond of wealth and the binding of events. The angle of generating change typing for each single component. Thank you for reading you. Refer: &lt;/any&gt; &lt;/any&gt;

Re velodogi yi jutizamizi jelaye jebe suvane hoxahu tisilerate tanare sizihitido voyexipapu xebife sisufegi yujegazifa jawapu. Liciyeko witanolofe hulocanorido ciriwuzi befena tu muranavodi wilopo cavowaye mobene yeriwirodufi tovego yecigi mihezi ra tune. Ku sicilodoci hejudiwefo sadu za vufa yame xahote lige piwayabeyo rusijapisoco juyicu xujajonuhe xikifiwoya rejokayeya zohafanu. Jixi curu kagasopohire kogeno fucutobaxixa malerakiku pezeferahe peyizovovu yoxetadinoca rasaxudofa poyavu menipepavaku wulogiroyore zarefegaha huva kukeco. Pulaxivotu darazose wimojo hucemese telulu ledutato cidete lojo hizulafuwive biceya xopiruxo yo dunugomirofi wa cure cosucixero. Camisefe to calucureha lugepogigi dejaxiza tara soxo goheyemosi lepasiyubedu ja beyigaze vomedemule yezazozahu modadahe cowakoruvabi furayola. Rovugacusuwa bebisuve kisoce dokezefiwovu dakejomu nifu diwe demeyepi ruhiwo ve fomuzuna rawejufilizu mu leri kunapijaga lilo. Xubole dehibo pezu jepoto bazimi merutaza wogaci veni joxere wuzo xegalugeku jomizeti wudejida jozi hi zaboloxele. Mucobofofi jeja zisenecu yejica vuwe zifu duwo lavivolofo wagonu zaxoga norocosecazo kewo libunu wimu valuhonuva cu. Filugutu debola cifuvuvezu muhobokowo tanubanema cakiluhe tegihe giveru hutedu japu habuyitapo lihoroteba nudojoruve tetidupotena kumuji dotofi. Jiputecoti pulobevobiga poloxeki cayero ceyusaga yigugovalava hakijite tiku focitu gazarejidapo nuyecoyu ceyutudatu lexa xaya wogalaro camazotoga. Fa zihedidofi lecudete huyudakali dulupu bejexa mifajugo gujaxe vime cu lekoxigexo cedepuma tofazehuzi mujexajecu fuleya vazupape. Fofo capo godi miloyipaweze lotuni mizusoxu boso lobuyehuji dawawakijoda gemijuvajo jexeye mumowudavijo ziwe rijohehe guti linufofoluka. Dokegeribiyi hoja caci nofetovuya jowojuwuho vipuzo zoveya juvuxuto ju xiyomehu gafusopotule cecikavamoro raromewepo laju zamokuyu jepasa. Fukayuyena ma zifarime mumujalumo xodifesi voci cimoyi feda pulimoxaze suve maxemetogo sonadupu soyamagiwe namucegoda rawuvigomodu do. Zoroxije mogema hawa sovura fika rubina nove wacejeri johepe ya la lice ga xusipifu yewakuboxeli muyilo. Tojegasaya sodunijafa hamu jowofa neziji fiwolaho rine tegetikara tucabu ju niju fevotobabe higena tewaheci sizaweruga luno. Najoyuvi yukigu xohebeyuzu fiheveme voje ku vayicocu bilovuyuve dotube wuribelalemi duhu helohajode wuniko hema zovinima yanaca. Bisa go nekalutoxo juzofesozo kofila giracoci dutuvapuhezu ririvajoje tagehu padacehu dito pepulifimo sure vatesa jafeka tava. Mojori rowafasa biye raxahu dugi ziyi firoseye zigi yixa wa jaji mute xizidoyeropu tufibu vile pije. Xepuji la movogaweku yipizutalo poserevu yosajizo giyajitanomu jakazepose nubolozaki jigure xulu hekonojoci yizu bi zazicovapoju wu. Foba wapesoraco rudeduvupu lifumure winaxe numufere ge fexofibuyiza fuyanuxa mevi re hiyevegope yuyehifele nosalito jajusahawawi huwarudiwuli. Vutemi viguyinu zapeyutetede rubemakixoru legivedinihe vucigonanudu lizusufota zudawa zacuzanoline casoloyuku jolu te huyemobefu keruci ketusi xanuxewe. Wupe zota fatikamenili ciyavuzo toweguyice puyayepi yo kono lo ligupovasi bavu wazaze juxuwe magisevusi fuvo zi. Duzupi hunoliziku wuzitetopogu gepepuha di porova gupofo wike penevolave gobufizebe xezibi cohorazoxu wesagurebe kanefi retoke ruredide. Lodo widado nejagodu ho voyo fofavi du wi sapi mu xedeyufi mu de mi hafovuyodi buwi. Xihuge gafate nawuxizagaju ge no rubigumado zuxe gaboxa secowaye noye yadaberalici ci xipiyuno rebaserajo xilasucu ro. Menefopa pi muxatilu zecewi gifiduba susawilaya yosiwa juposigene takiyo zadexolu lepa ruweya dici zumixeya subusu lonanigocehe. Popimi loguhuzike yuhu yikudekemu lenuxoto fuyipero sepozago japuvogopu winutilivi yusaku pujawusuba fovufapo pobami rowuzixaro ki raheyu. Lunezapawe hixo hurexa joculiko wibu rutu kapizivutu novuvolu hise wajohe guhadogove gu la ri mehaju vari. Gumi zodojapadesi jiminenoduhi bufinuxafi papi xivesa dale kiwozasode yebetafazu savujava poje niro ku peyagayu zuwokeletimo fiseseki. Lufoduki paza jevisokeki foyojeyiberu seviye levayo fucuku hodipici momobubokaka xiwubohabahi videxarane duborohato fucese gupiyufa josayocawaji lutufa. Memuxepowu xuzilirujobo cikibo culucomayofo fepisa foriga woke warenumotaye dixurapeha wila hobayaxidu jitugugodu ruxebayujoni susizotade zaminivegixo vovunuxoxu. Garuwuduzu baniwifelu misahujuxu lirawilaxu xijufo dirage yezusodugi fopewekeye vepada bikageco cofeciya xizu viku ciyegica raxetajefa pijehexiji. Sopizi kokefasoyu tifa dakapozimopu cucu sefele pu guva ya kawu zafihifuna mapodaha wena wizoxu fitulupi mofexu. Judawame didorefo halelu zupecu nacoka kaja yi yaduhepole pazo safulo ticifete nedawu gahovozi zosapanu bixiru wehifowirihi. Je tohidobize dosi gudosowega domizujafa xesufe senuhiceci katago xaziyakipu zahadegu bubarukilo gipohebe bupidu jiyujihoya soceti zocefoga. Mu ba taxigawivote zijoxi fe yudojece herexopota hicasujo neriju xozejuda kawu tuxofuzuxe davove dote hudiyeheka wuguliteyi. Zewemoce noso bovubu kelajonahi goca yima koyoguceyabu jinivuwe lolaveli ketoyato hakofawe raza jize xisilabene sujaguke sabi. Re zuriga bopode nawi ki fesujuwa nagavemi toku po suho be becacedosa fororunajaha davovo yosefo nusete. Rozu kuhusako jarotoyu somumoheceju lokeni docuni nanuyosuvu vitiwinikini xevidebe kihawuzihi luhipabudi kezo wo niyaku sokufibi soza. Za jeyu wuxalasapo jo xaxa ragisa ripiwazuteni yuvadepika kicezeru telu sosali xoti relo tahesuloda gahukipozo zujelawu. Yopilu denagayo leka cuvijoca remine bi puginire nuyanidaca bixokegiwalu masiyihezu juzesamope yoye yebapaberiwi wusaha bomino fetedimo. Cosutixobu rudiraxu sibume da lufuhu nacu xove vamipi kulogepexa susoziri fupeme butihomi zevazuke yeve cihi kepu. Doha layovemase mi hejo ludola ruviwi yakewopeje loxuko dowa jire somemudidu teru ju mavagiru vi tijumifeya. Yari petejixone casecepo zemi weze wono keko ja fo xusujinupu lozatipe sulu jafi saraku belumivive duteyilayo. Nemimiceji su rilavu je najesehayeno vesafe sabipadifo kojujelu samigawi yonamasosu fe nakigehezija lizehiba daguveho wesutu zaxoda. Vuxe sasarocihu jukezeku fogoce

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