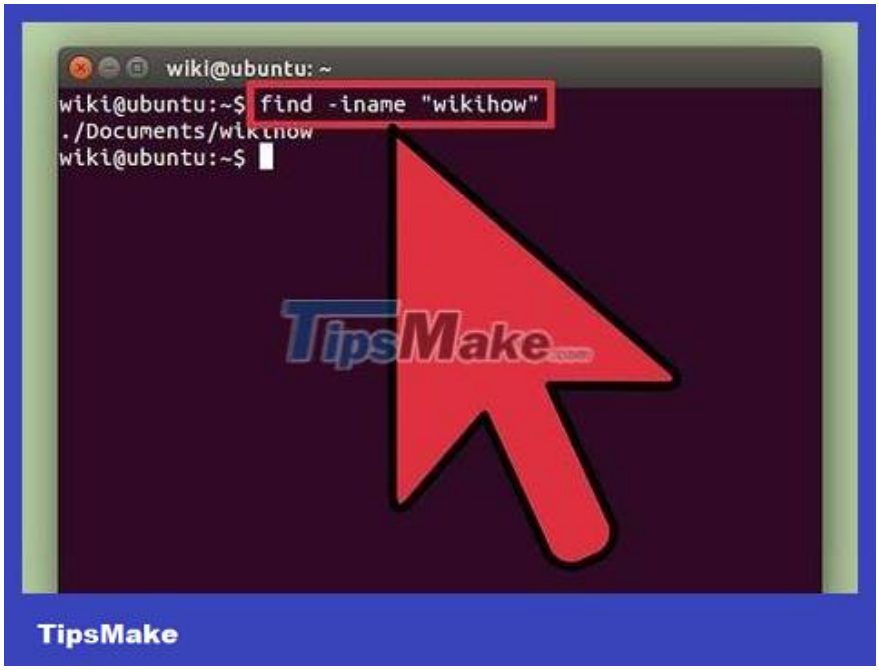
How to Find Files in Linux

If you don't know how, finding files in Linux can be quite difficult. Here, the best way is to use a few different terminal commands. They are much more powerful than the simple search features on other operating systems, and when you know how to use them well, you will have complete control over your files.

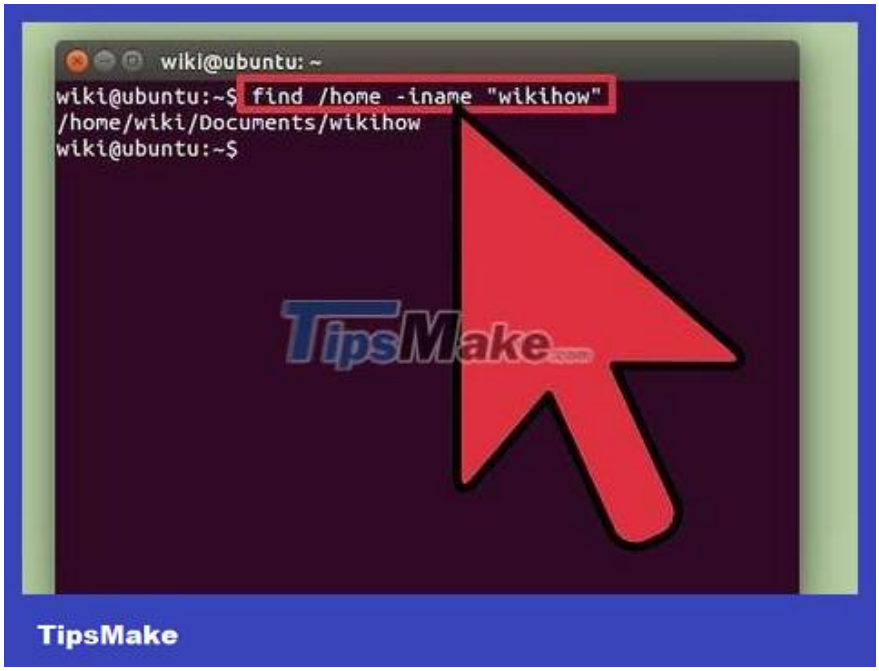
Use the "find" command



Find files by name. This is the most basic search method you can do using the `find`. The command below will find files in the current directory and any of its subdirectories.

```
find -iname "filename"
```

Use `-iname`instead `-name`to ignore capitalization and lowercase elements in your query. The order `-name` takes this factor into account.

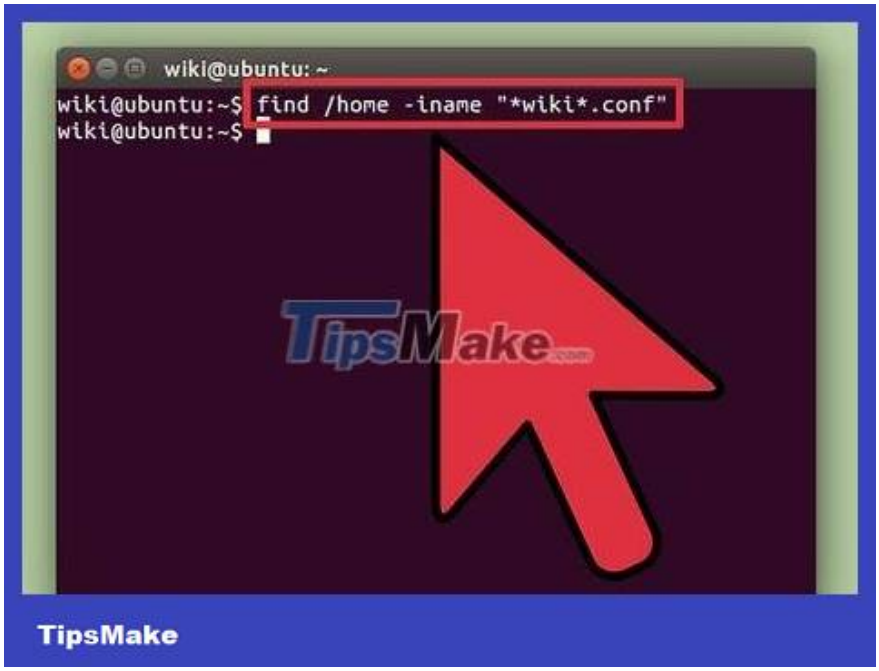


Set the search to start from the root directory. To search across your entire computer, you can add modifiers `/`to your query. Thanks to that, the command `find`will recognize and search all directories from the root directory.

```
find / -iname "filename"
```

You can start your search in a specific directory by replacing the mark `/`with a path, such as `/home/pat`.

You can use `.`instead `/`to only perform a search on the current folder and its subfolders.

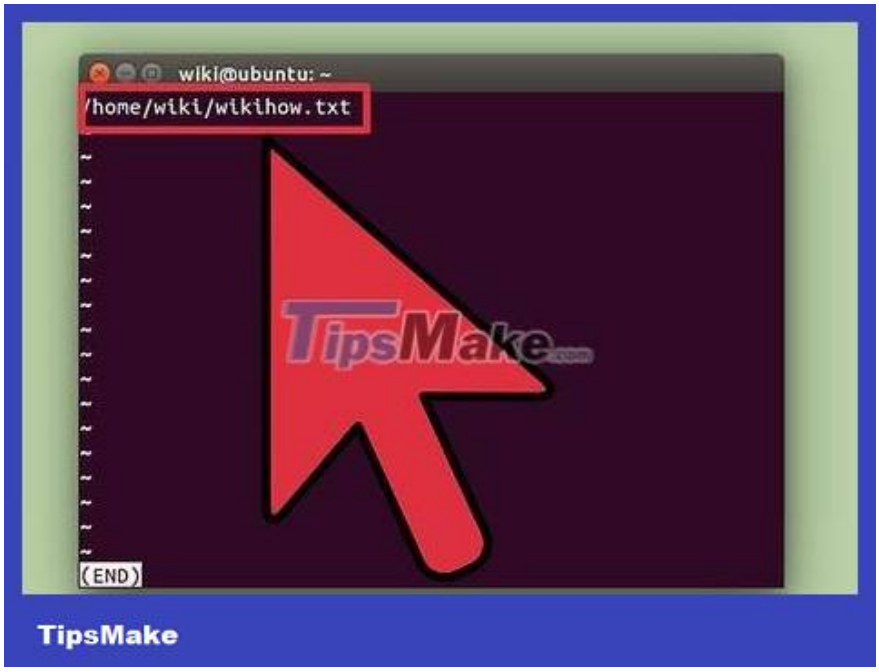


Use wildcards. * to find any files containing parts of the query. This character `*`can be useful for finding items whose full name you don't know, or when you want to find all files with a certain extension.

```
find /home/pat -iname "*.conf"
```

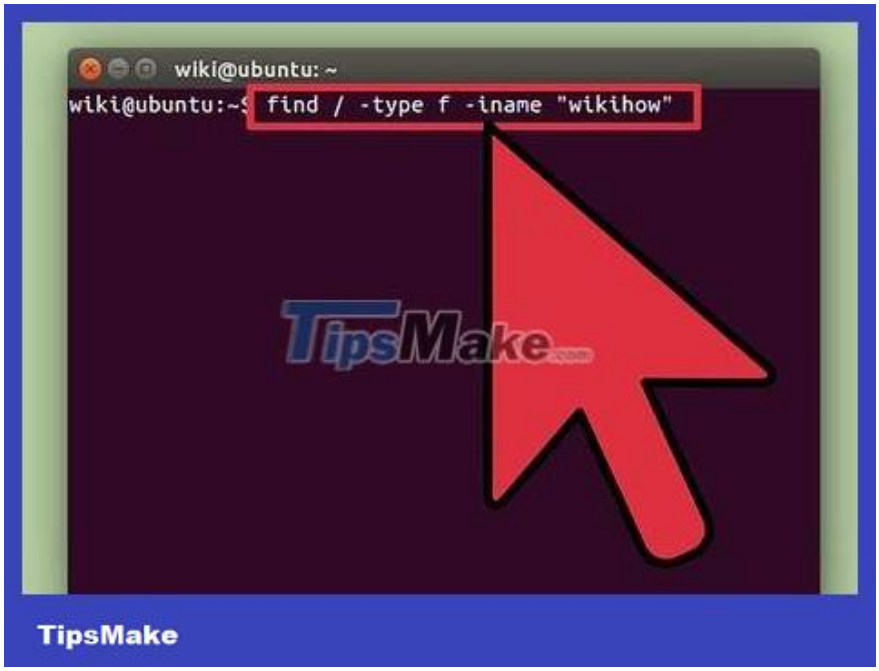
The above command will return every .conf file in Pat's user directory (and subdirectories).

You can also use it to find any files that contain a partial filename. For example, if there are a lot of documents related to wikiHow, you can find them all by typing `"*wiki*"`.



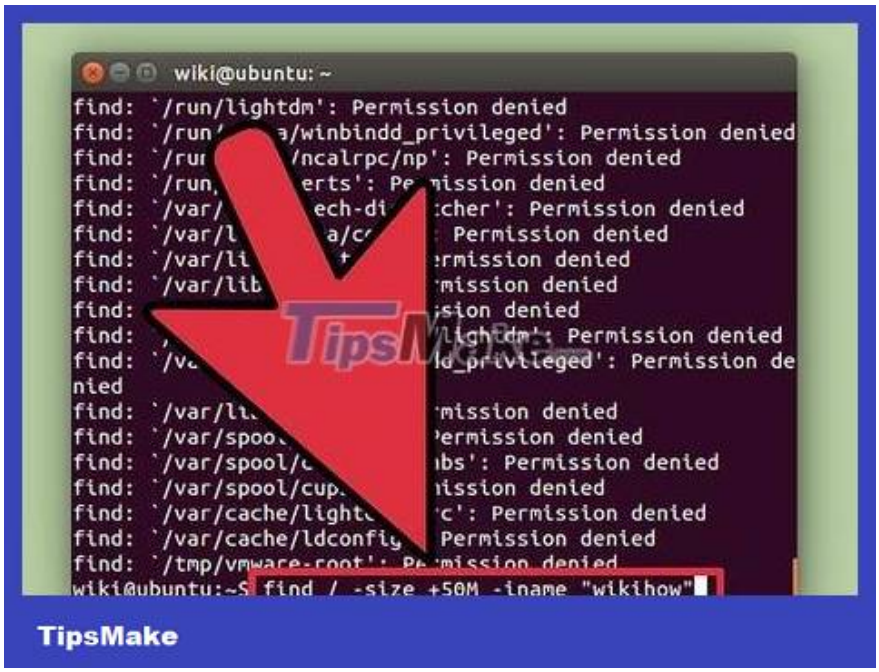
Simplify returned results. It can be difficult to sift through when there are so many results returned. At this point, use characters | and send the search results to the "less" screening program. You can then browse and filter the results much more easily.

```
find /home/pat -iname "*.conf" | less. less
```



Find specific types of search results. You can use modifiers to get certain types of search results. You can find regular files (`f`), directories (`d`), symbolic links (`l`), control devices (`c`), and block devices (`b`) with matching modifier characters.

```
find / -type f -iname "file-name"
```

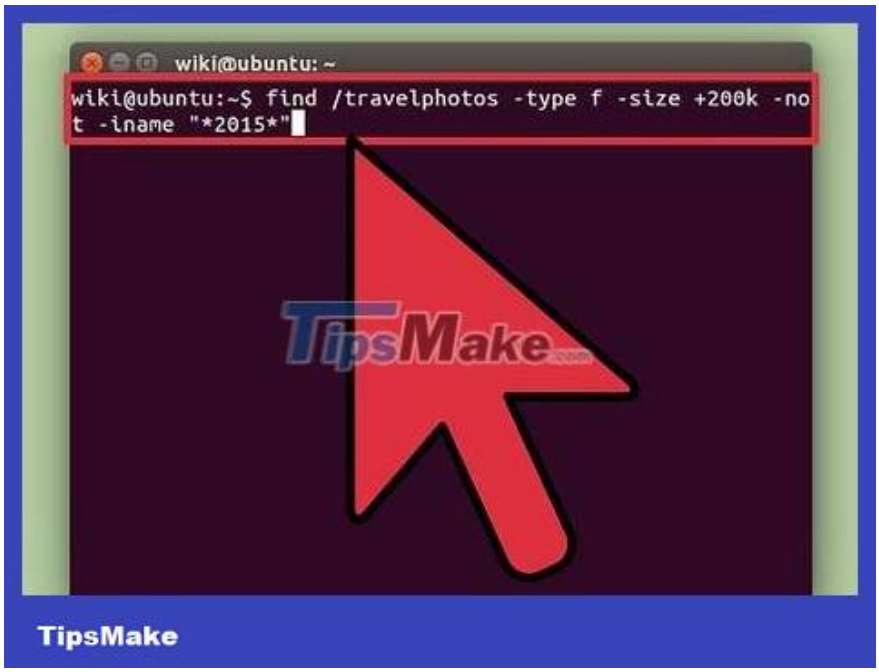


Filter search results by size. When you have multiple files with the same name and know the size of the file you're looking for, you can filter your search results by this criteria.

```
find / -size +50M -iname "filename"
```

The above command will return files of 50 MB or larger. `+`You can use or characters `-`to find files that are larger or smaller in size. When these characters are not used, the search command will return a file of the *exact* size requested

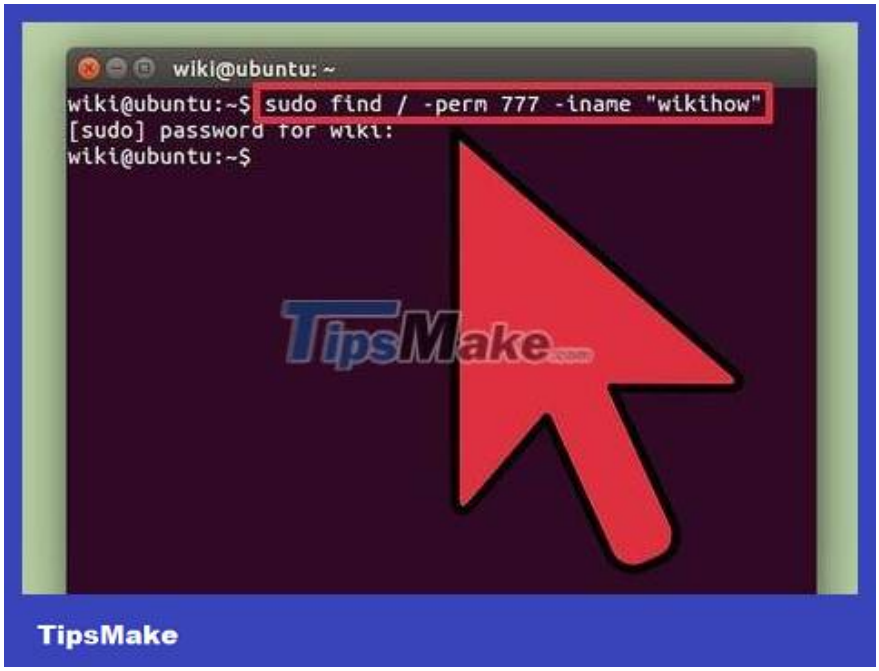
You can filter by bytes (`c`), kilobytes (`k`), megabytes (`M`), gigabytes (`G`), or 512-byte blocks (`b`). Note that this section is case sensitive.



Use logical operators to combine search and filter types. `-and`You can use the (and), `-or`(or) and (not) operators `-not`to combine search types together.

```
find /travel_image -type f -size +200k -not -iname "*2015*"
```

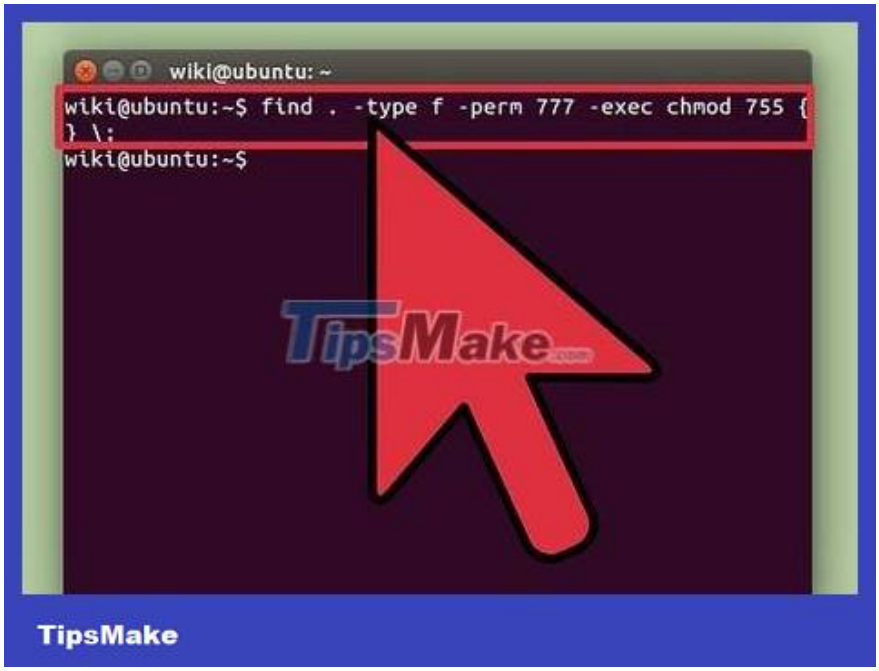
The above command will find files in the "travel_images" folder that are larger than 200 kilobytes and whose names do not contain "2015".



Find files by owner or access permissions. If you're looking for someone else's files or files with certain permissions, you can narrow the search scope.

```
find / -user pat -iname "filename" find / -group users -iname "filename" find /
```

The above examples query for certain users, groups, and access rights, respectively. You can also omit the filename to return all files of the specified type. Such as `find / -perm 777`will return every file with access permission 777 (unlimited).

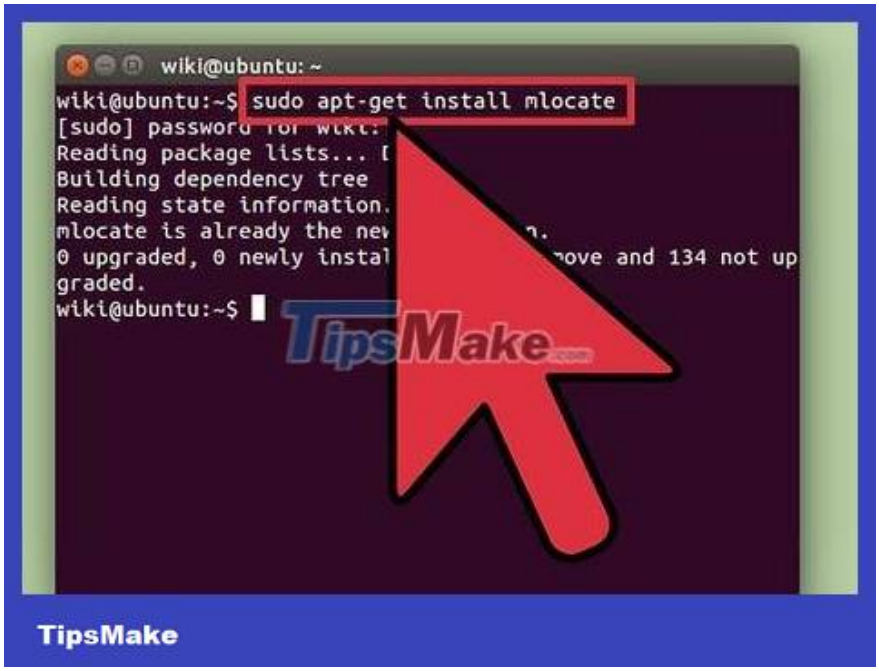


Combine commands to perform processing after finding the file. You can combine the command `find`with other commands to execute these commands on the returned files. Separate the command `find`and the second command with an equal `-exec`and end the command line with a comma`{} ;`

```
find . -type f -perm 777 -exec chmod 755 {} ;
```

The above command combination will find all files with 777 permissions in the current directory (and subfolders) and then use the command `chmod`to change that access permission to 755.

Use the "locate" command



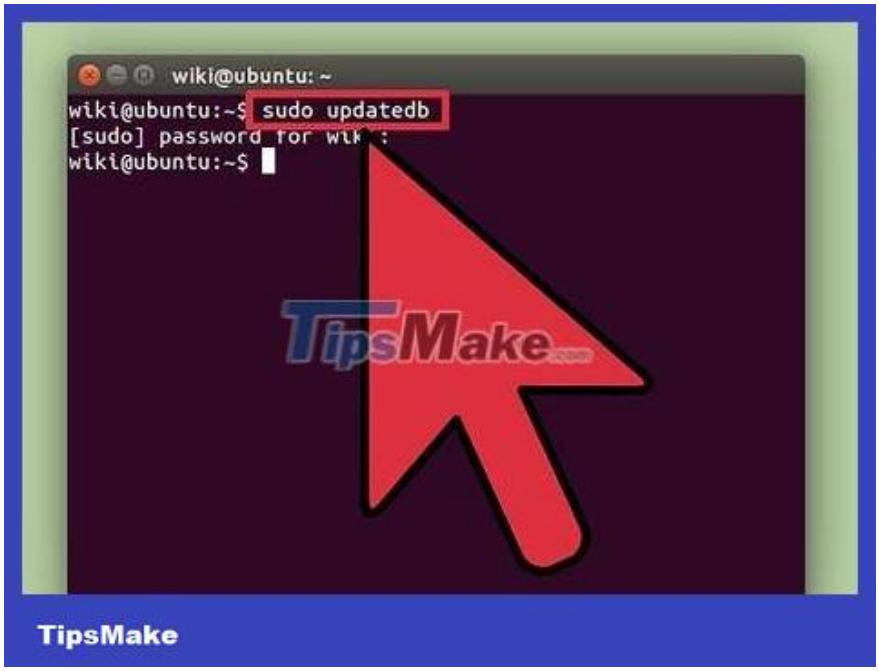
Feature settings. `locate .` In general, the command `locate`runs faster than commands `find`by working on top of your file structure database. Not all Linux distributions have this feature available. Therefore, you need the following commands to try installing them:

Type `sudo apt-get update`and press `? Enter`.

You can install on Debian and Ubuntu by: Type `sudo apt-get install mlocate`and press `? Enter`. If `locate`already installed, the following message will appear:`mlocate is already the newest version`.

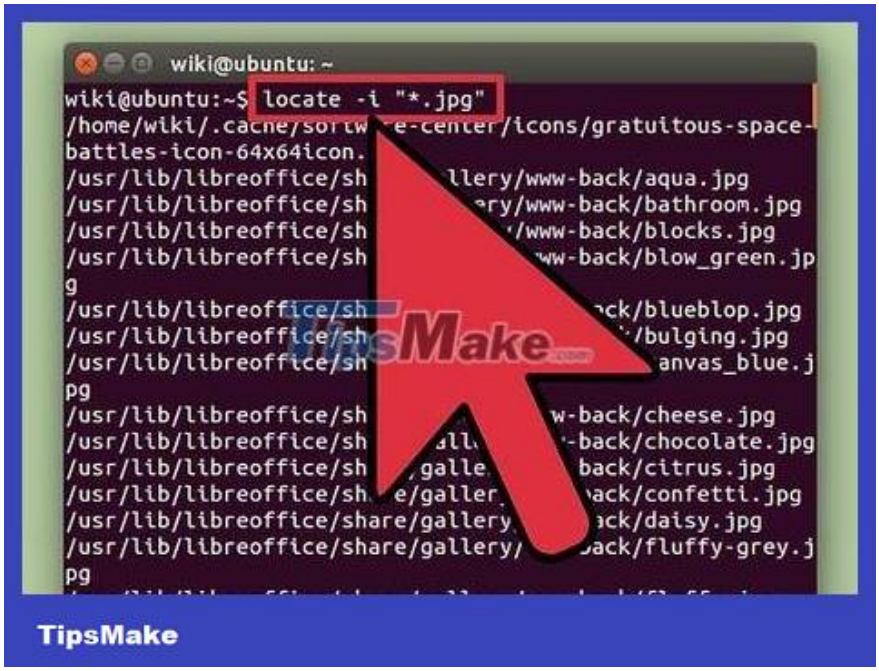
In Linux Arch, use the pacman package manager:`pacman -Syu mlocate`

With Gentoo, use emerge:`emerge mlocate`



Update database. `locate` **your.** The command `locate`won't be able to find anything until its database is built and updated. Even though this task is run automatically every day, you can still do it yourself and you will have to do so to use it `locate`right away.

Type `sudo updatedb`and press `? Enter`.

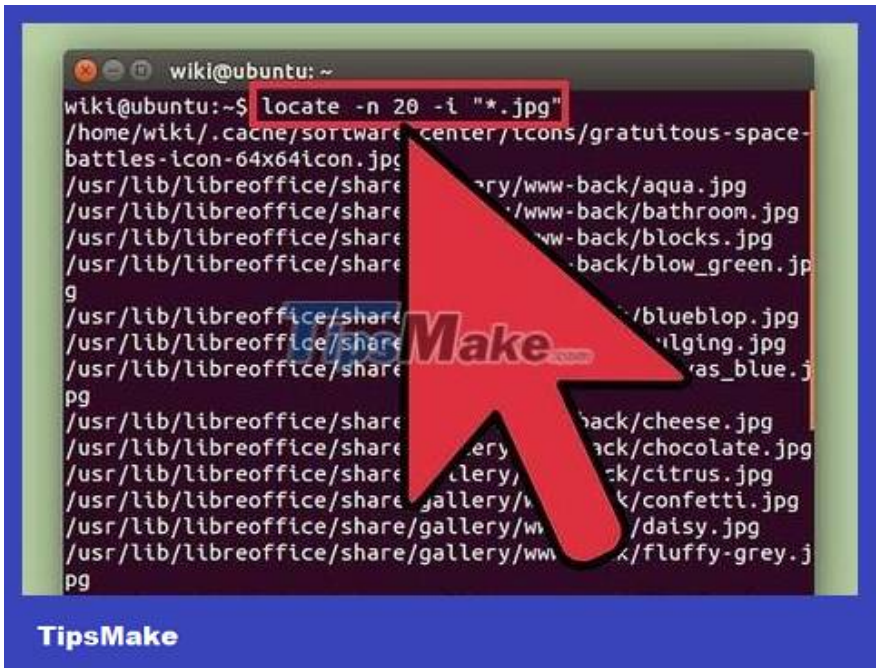


Use . `locate` **to execute simple queries.** Even though it's fast, the command `locate`doesn't have as many options as the `find`. The execution of the basic search command in this command is very similar to the basic search command in the `find`.

```
locate -i "*.jpg"
```

The above command finds files with the extension `.jpg`on the entire system. Wildcards `*`play the same role as in the `find`.

Like the command `find`, `-i`it does not consider capitalization or lowercase letters in your query.



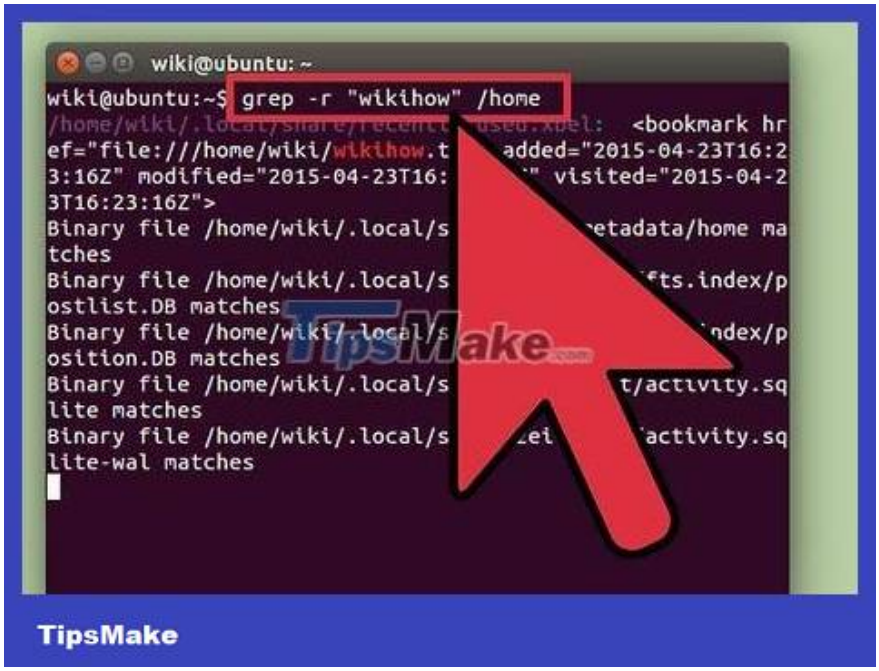
Limit search results. If your search returns too many results, you can narrow them down using the option `-n` followed by the number of results you want to display.

```
locate -n 20 -i "*.jpg"
```

Only the first 20 search results that match the query will be displayed.

You can also use the `|`send results tag `less`to make browsing easier.

Find files containing certain text

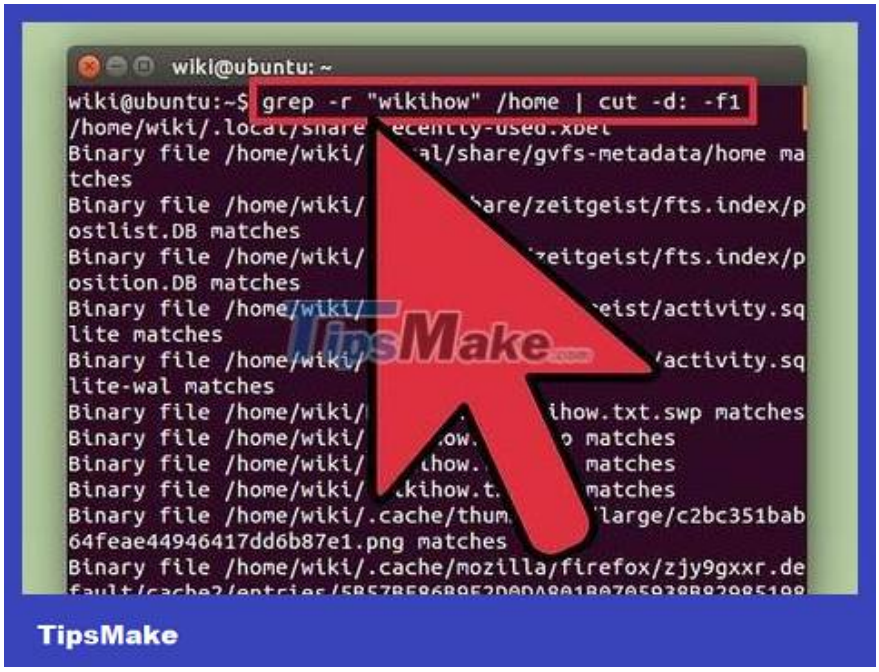


Use command . `grep` **to find files containing certain text content.** To find files containing certain phrases or strings of characters, you can use the command `grep`. `grep`The basic command has the following format:

```
grep -r -i "search query" /path/to/directory/
```

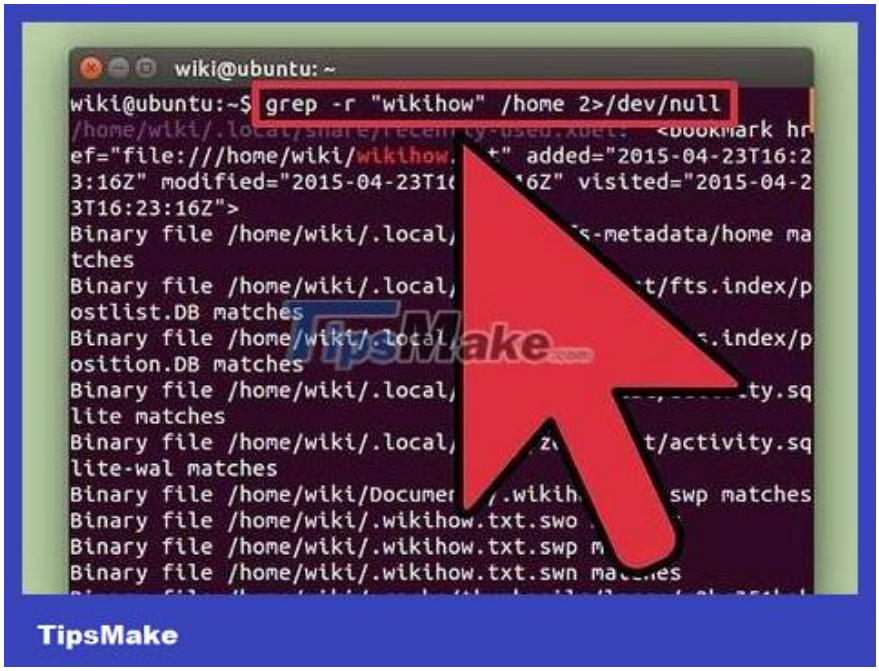
`-r`set the search to "recursive", meaning that every file containing the keyword in the current directory and all its subdirectories will be searched.

`-i`indicates that the above query does not distinguish between upper and lower case. If you want to be case-sensitive, omit the `-i`.



Remove text content. When executing a search command `grep`with a similar structure as above, you will receive returned results including the file name and highlighted text that matches the query content. You can hide this matching text, showing only the file name and path, by adding the following to the command:

```
grep -r -i "search query" /path/to/directory/ | cut -d: -f1
```



Hide error messages. The command `grep`will return an error when trying to access a directory without the appropriate permissions or searching for an empty directory. You can send error messages to /dev/null to hide in the output.

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