

# Basic Command Lines

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This README file will teach you the basic command line usage for macOS/Linux. Note that this guide is not comprehensive; if you are interested in more commands, you should search them on google.

## The Basics

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After opening your terminal, you should see a `$`. You can then type any command after the dollar sign. The home directory is indicated by `~`.

## Directories

```
$ cd [folder]
```

This will change the current directory to `[folder]`. For example, if you type `$ cd Desktop`, you will navigate to the `Desktop` directory.

*Note:* if you type `$ cd` in any directory, you will go back to your home directory.

*Quick tip:* you can drag a folder to your terminal, and the terminal will copy the folder path to the command line.

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```
$ pwd
```

This will print out the current working directory. For example, if you type `$ pwd` in the home directory, you should see something like `/Users/[YourName]`.

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```
$ ls
```

This will list out all the files and folders in the current directory. You can also add `-l` to list out files/folders in details, or `-a` to list out files/folders and hidden files/folders.

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```
$ mkdir [folder_name]
```

This will create a new folder named 'folder\_name'. For example, if you type `$ mkdir test` in your Desktop directory, you will create a folder named 'test' in the Desktop.

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## Files

```
$ touch [file_name]
```

This will create a new file named 'file\_name'. For example, if you type `$ touch hello.txt` in your Desktop directory, you will create a file named 'hello.txt' in the Desktop.

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```
$ open [file_name]
```

This will open the file whose name is 'file\_name'.

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```
$ cat [file_name]
```

This will display the file whose name is 'file\_name' in terminal.

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## Miscellaneous

```
$ clear
```

This will clear the terminal screen.

## Java

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Now, you should have some basic understanding of how to use the command line. Here, I will show you how to run java program in terminal.

First, you should navigate to the directory that contains java file(s). If you use `Eclipse` to write java program, the java file(s) should be in the `src` folder. After that, type

```
$ javac [java file name]           # this will create a .class file
$ java [java file name without .java] # this will run the java program
```

Example:

```
$ javac Main.java
$ java Main
```

The `javac` command will take `Main.java` as input and output a `Main.class`, which is in bytecode, and the `java` command will execute that bytecode.

*Quick tip:* You can type `javac *.java` to create all `.class` files at once.

In addition, you can also add parameters after the `java` command. For instance, in Lab4, you can type

```
$ java DNAList <arraysize> <commandfile>    # without the '<' and '>'
```

Inside the main method, you can use `args[0]` to access the `arraysize` and `args[1]` to access the `commandfile`.

If you want to terminate a java program, like a running `GUI` or an `infinite loop`, you can press `ctrl+c` to terminate the program.