Name: Deher Zainab

Sap ID: 49710

BSCS-5th Semester

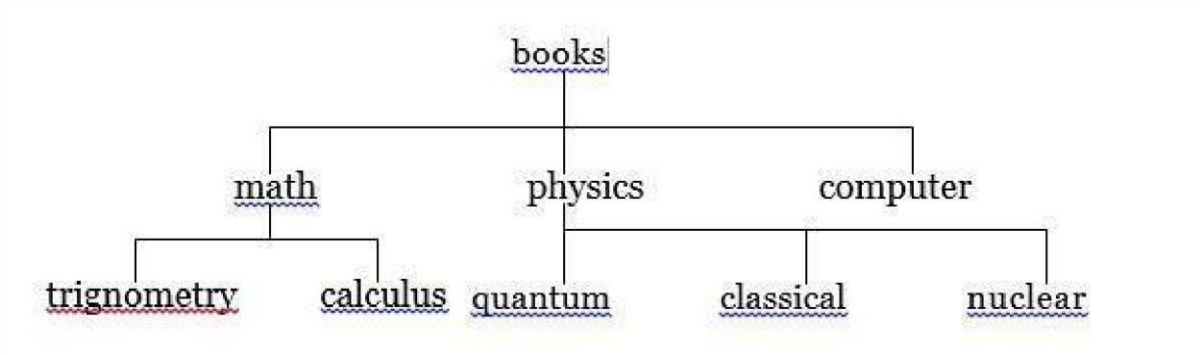
OS Lab Tasks

LAB # 3

Submitted to:

Mam Ayesha

Question: Make the following directory hierarchy:




```
student@student-virtual-machine:~$ mkdir Books
student@student-virtual-machine:~$ mkdir Books/math
student@student-virtual-machine:~$ mkdir Books/physics
student@student-virtual-machine:~$ mkdir Books/computer
student@student-virtual-machine:~$ mkdir Books/math/trigonometry
student@student-virtual-machine:~$ mkdir Books/math/calculus
student@student-virtual-machine:~$ mkdir Books/physics/quantum
student@student-virtual-machine:~$ mkdir Books/physics/classical
student@student-virtual-machine:~$ mkdir Books/physics/nuclear
student@student-virtual-machine:~$ ls
Books  Desktop  Documents  Downloads  Music  Pictures  Public  snap  Templates  Videos
student@student-virtual-machine:~$ cd Books
student@student-virtual-machine:~/Books$ cd math
student@student-virtual-machine:~/Books/math$ cd trigonometry
student@student-virtual-machine:~/Books/math/trigonometry$ cd ..
student@student-virtual-machine:~/Books/math$ cd calculus
student@student-virtual-machine:~/Books/math/calculus$ cd ..
student@student-virtual-machine:~/Books/math$ cd ..
student@student-virtual-machine:~/Books$ cd physics
student@student-virtual-machine:~/Books/physics$ cd quantum
student@student-virtual-machine:~/Books/physics/quantum$ cd ..
student@student-virtual-machine:~/Books/physics$ cd classical
student@student-virtual-machine:~/Books/physics/classical$ cd ..
student@student-virtual-machine:~/Books/physics$ cd nuclear
student@student-virtual-machine:~/Books/physics/nuclear$ cd ..
student@student-virtual-machine:~/Books/physics$ cd ..
student@student-virtual-machine:~/Books$ cd computer
student@student-virtual-machine:~/Books/computer$ ls
student@student-virtual-machine:~/Books/computer$ cd ..
student@student-virtual-machine:~/Books$ cd ..
```

Question: Create other directory chemistry under books, and move to chemistry directory.

```
student@student-virtual-machine:~$ mkdir Books/chemistry
student@student-virtual-machine:~$ cd Books
student@student-virtual-machine:~/Books$ cd chemistry
```

Question: Now you are quite away from your home directory. How would you go to your home directory directly?

Your current location is:

 books chemistry Go to Home directory directly.

```
student@student-virtual-machine:~/Books/chemistry$ cd
```

Question: Now you are in your home directory. How will you go to chemistry directory directly?

```
student@student-virtual-machine:~$ cd Books/chemistry
```

What do you think **books/chemistry** is relative or absolute path?

Books/chemistry is a **relative path** because:

- It does not start with / (root directory).

Question: How will you add a directory **graphics** under the directory computer while you are in **physics**' subdirectory **classical**?

```
student@student-virtual-machine:~$ cd Books/physics/classical
student@student-virtual-machine:~/Books/physics/classical$mkdir Books/computer/graphics
```

Question: You are in books directory, from here try to remove sub-directory quantum under the directory physics.

```
student@student-virtual-machine:~$ cd Books
student@student-virtual-machine:~/Books$ rmdir physics/quantum
student@student-virtual-machine:~/Books$ ls
chemistry  computer  math  physics
```

Now move to directory computer,

```
student@student-virtual-machine:~/Books$ cd computer
```

from here remove sub-directory calculus under the directory math.

```
student@student-virtual-machine:~/Books/computer$ rmdir Books/maths/calculus
rmdir: failed to remove 'Books/maths/calculus': No such file or directory
```

Question: Which are the Linux Directory Commands? Explain the understanding of commands in your own words.

Linux Directory Commands

1. **pwd** Shows the current directory path.
2. **ls** List the file in the directory, just like dir command in DOS.
3. **ls -a** Display all the files, and subdirectories, including hidden files.
4. **ls -l** Display detailed information about each file, and directory.
5. **ls -r** Display all the files in reverse order.
6. **cd** Used to Change your current directory to another directory.
7. **cd /** Move to root directory
8. **cd ..** Move to one directory backward
9. **cd dir-name** To change to any sub-directory under the current directory.
10. **mkdir** Creates a new directory.
11. **rmdir dir-name** Delete a Directory (if it is empty) rmdir will only work if the directory you are trying to remove does not contain any file. So first remove all files from the directory
12. **rm -r dir-name** Delete a Directory (if it is not empty)