

RIPHAH INTERNATIONAL UNIVERSITY, ISLAMABAD



Lab # 3

Bachelors of Computer Science – 6th Semester

Subject: Operating System

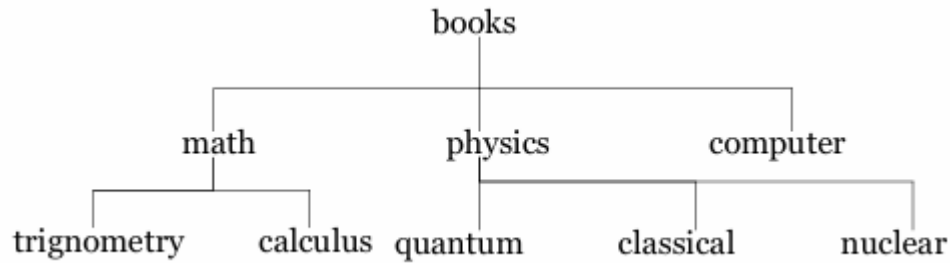
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Task: 1

Make the following directory (03 Marks)



Output:

```
Welcome to Fedora 33 (riscv64)
```

```
[root@localhost ~]# mkdir Books  
[root@localhost ~]#
```

```
[root@localhost ~]# cd Books  
[root@localhost Books]# mkdir maths  
[root@localhost Books]# mkdir physics  
[root@localhost Books]# mkdir computer  
[root@localhost Books]# ls  
computer  maths  physics
```

```
[root@localhost Books]# cd maths  
[root@localhost maths]# mkdir trigonometry  
[root@localhost maths]# mkdir calculus  
[root@localhost maths]# ls  
calculus  trigonometry
```

```
root@localhost maths]# cd ..  
root@localhost Books]# cd physics  
root@localhost physics]# mkdir quantum  
root@localhost physics]# mkdir classical
```

```
[root@localhost Books]# cd computer  
[root@localhost computer]# mkdir classical  
[root@localhost computer]# mkdir nuclear  
[root@localhost computer]# ls  
classical  nuclear
```

Task: 2

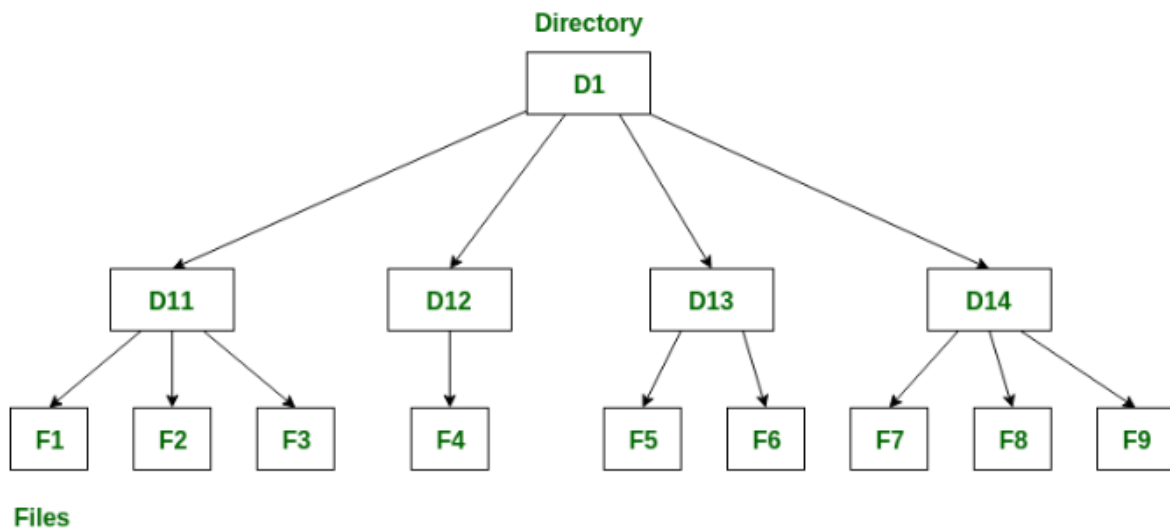
Which are the Linux Directory Commands? Explain the understanding of commands in your own words. Also define what is BASH?

1. **pwd**: Shows your current directory (like your location in the file system).
2. **ls**: Lists files and directories in the current directory.
3. **cd**: Changes the current directory to another.
4. **mkdir**: Creates a new directory.
5. **rmdir**: Deletes an empty directory.
6. **rm -r**: Deletes a directory and all its contents.
7. **cp**: Copies files or directories to a new location.
8. **mv**: Moves or renames files or directories.
9. **touch**: Creates an empty file or updates the timestamp.
10. **find**: Searches for files or directories.

What is BASH?

BASH (**Bourne Again Shell**) is a command-line interface and scripting language for interacting with Linux systems. It interprets and runs the commands you type, and can also be used to write scripts for automating tasks.

Task: 3



Note: Include screenshots, where required to illustrate your explanation. (02 Marks)

Output:

```
[root@localhost ~]# mkdir D1
[root@localhost ~]# cd D1
[root@localhost D1]# mkdir D11
[root@localhost D1]# mkdir D12
[root@localhost D1]# mkdir D13
[root@localhost D1]# mkdir D14
[root@localhost D1]# ls
D11 D12 D13 D14
[root@localhost D1]#
```

```
[root@localhost D1]# cd D11
[root@localhost D11]# touch F1
[root@localhost D11]# touch F2
[root@localhost D11]# touch F3
[root@localhost D11]# ls
F1 F2 F3
[root@localhost D11]#
```

```
[root@localhost D11]# cd ..
[root@localhost D1]# cd D12
[root@localhost D12]# touch F4
[root@localhost D12]# is
sh: is: command not found
[root@localhost D12]# ls
F4
[root@localhost D12]#
```

```
[root@localhost D12]# cd ..
[root@localhost D1]# cd D13
[root@localhost D13]# touch F5
[root@localhost D13]# touch F6
[root@localhost D13]# ls
F5 F6
[root@localhost D13]#
```

```
[root@localhost D13]# cd ..
[root@localhost D1]# cd D14
[root@localhost D14]# touch F7
[root@localhost D14]# touch F8
[root@localhost D14]# touch F9
[root@localhost D14]# ls
F7 F8 F9
[root@localhost D14]#
```

```
[root@localhost ~]# ls -R D1
D1:
D11 D12 D13 D14

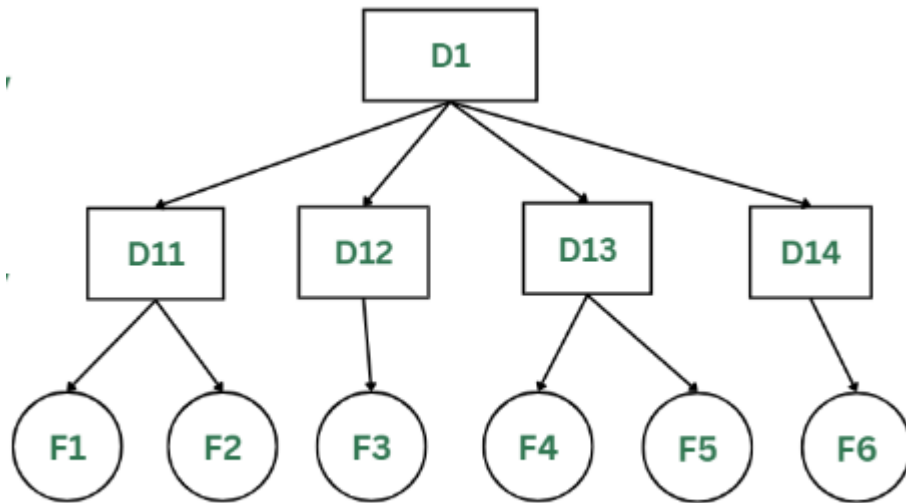
D1/D11:
F1 F2 F3

D1/D12:
F4

D1/D13:
F5 F6

D1/D14:
F7 F8 F9
[root@localhost ~]#
```

Task: 4



Note: Include screenshots, where required to illustrate your explanation.

Output:

```
[root@localhost ~]# mkdir D1
[root@localhost ~]# cd D1
[root@localhost D1]# mkdir D11
[root@localhost D1]# mkdir D12
[root@localhost D1]# mkdir D13
[root@localhost D1]# mkdir D14
[root@localhost D1]# ls
D11 D12 D13 D14
[root@localhost D1]#
```

```
[root@localhost D1]# mkdir D11
[root@localhost D1]# cd D11
[root@localhost D11]# touch F1
[root@localhost D11]# touch F2
[root@localhost D11]# ls
F1 F2
```

```
[root@localhost D12]# cd ..
[root@localhost D1]# cd D13
[root@localhost D13]# touch F4
[root@localhost D13]# touch F5
[root@localhost D13]# ls
F4 F5
```

```
[root@localhost D11]# cd ..
[root@localhost D1]# cd D12
[root@localhost D12]# touch F3
[root@localhost D12]# ls
F3
```

```
[root@localhost D13]# cd ..
[root@localhost D1]# cd D14
[root@localhost D14]# touch F6
[root@localhost D14]# ls
F6
```

```
[root@localhost ~]# ls -R D1
D1:
D11 D12 D13 D14

D1/D11:
F1 F2

D1/D12:
F3

D1/D13:
F4 F5

D1/D14:
F6
```