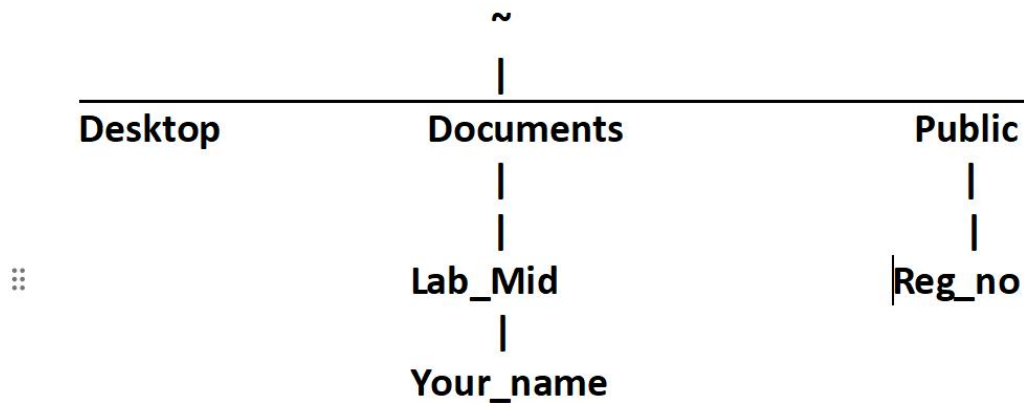


Name :: Asadullah
Registration no. :: FA22-BSE-037

LAB Mid

Question No.1:-



1. Copy your name directory in Reg_no Directory
2. Rename lab_mid to os_lab
3. Delete reg_no directory

Solution::

```
fa22bse037@fa22bse037-VirtualBox: ~$ ls
A1          executable-file  prog1.cpp          receiver1.cpp
A2          executable-file  prog1_writer.cpp   sender
abx.txt     executable-file  prog2.cpp          sender1.cpp
activity1.cpp files1          prog2_reader.cpp   snap
activity2.cpp files2          prog3.cpp          table.cpp
activity3.cpp files3          prog4.cpp          Templates
a.out       files4          prog_lab7.cpp      test
argument.cpp files5          prog_max_min.cpp   video
Asad37      folder1         prog_mx_mn_cmd.cpp videos
asad.txt    lab6.cpp        prog_palindrom.cpp Videos
code.cpp    media           prog_prime.cpp     writer
de3         music           Public              writer1.cpp
Desktop     Music           reader              reader1.cpp
Documents   output.txt      receiver
Downloads   Pictures
fa22bse037@fa22bse037-VirtualBox:~$ mkdir -p Documents/Lab_Mid/Asadullah
fa22bse037@fa22bse037-VirtualBox:~$ mkdir -p Public/FA22BSE037
fa22bse037@fa22bse037-VirtualBox:~$ cp -r Documents/Lab_Mid/Asadullah Public/FA22BSE037
fa22bse037@fa22bse037-VirtualBox:~$ mv Documents/Lab_Mid Documents/OS_lab
fa22bse037@fa22bse037-VirtualBox:~$ rm -ri Public/FA22BSE037
rm: descend into directory 'Public/FA22BSE037'? yse
rm: remove directory 'Public/FA22BSE037/Asadullah'? yes
rm: remove directory 'Public/FA22BSE037'? yes
fa22bse037@fa22bse037-VirtualBox:~$
```

Question no.2:-

write a c++ code that takes argumentt as command line argument. the program should find the factorial of a no entered by user as command line argument.

Solution::

```
#include <iostream>
using namespace std;

// Function to calculate factorial
long long factorial(int num) {
    long long fact = 1;
    for (int i = 2; i <= num; i++) {
        fact *= i;
    }
    return fact;
}

int main(int argc, char* argv[]) {
    // Check if command-line argument is provided
    if (argc != 2) {
        cout << "Usage: " << argv[0] << " <number>" << endl;
        return 1;
    }

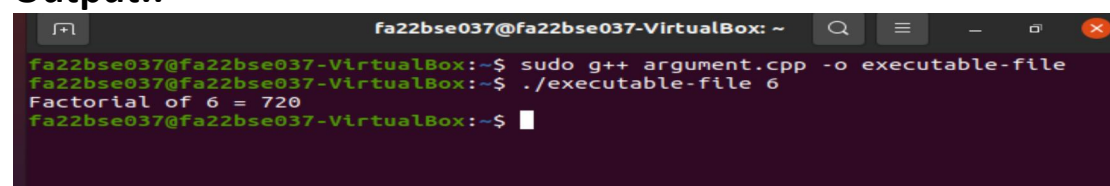
    // Convert command-line argument to integer
    int num = stoi(argv[1]);

    // Check if input is non-negative
    if (num < 0) {
        cout << "Error: Factorial is not defined for negative numbers." << endl;
        return 1;
    }

    // Calculate and display factorial
    long long fact = factorial(num);
    cout << "Factorial of " << num << " = " << fact << endl;

    return 0;
}
```

Output::



```
fa22bse037@fa22bse037-VirtualBox: ~
fa22bse037@fa22bse037-VirtualBox:~$ sudo g++ argument.cpp -o executable-file
fa22bse037@fa22bse037-VirtualBox:~$ ./executable-file 6
Factorial of 6 = 720
fa22bse037@fa22bse037-VirtualBox:~$
```