

# EC 2010 : Computer Programming

## Lab 02: Program Structure

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2022/E/126

EC2010

2023/10/04

01)

a.

```
1 // MALHARA R.M.Y.S
2
3 // 2022/E/126
4
5 // EC2010
6
7 //Group: C
8
9 // Lab: 02
10
11 // Program Description: [insert brief description here]
12
13 // Certificate of Authenticity:
14
15 // I certify that the code in the method function main of this project
16
17 // is entirely my own work.
18
19 #include <iostream>
20
21 using namespace std;
22
23 int main()
24 {
25     cout << "Hello world!\nA\noop\nli\na\nr\n\n";
26 }
27
```

C:\Users\2022e126\Downloads\Lab02\Lab02-2022E126\bin\Debug\Lab02-2022E126.exe

Hello world!  
A  
oop  
li  
a  
r  
r  
nn  
Process returned 0 (0x0) execution time : 0.016 s  
Press any key to continue.

b.

```
1 // MALHARA R.M.Y.S
2
3 // 2022/E/126
4
5 // EC2010
6
7 //Group: C
8
9 // Lab: 02
10
11 // Program Description: [insert brief description here]
12
13 // Certificate of Authenticity:
14
15 // I certify that the code in the method function main of this project
16
17 // is entirely my own work.
18
19 #include <iostream>
20
21 using namespace std;
22
23 int main()
24 {
25     cout << "Welcome to the Programming!"<<endl;
26     cout << "It's going to be an interesting module."<<"\n";
27 }
28
```

C:\Users\2022e126\Downloads\Lab02\Lab02-2022E126\bin\Debug\Lab02-2022E126.exe

Welcome to the Programming!  
It's going to be an interesting module.  
Process returned 0 (0x0) execution time : 0.125 s  
Press any key to continue.

C.

The screenshot shows a C++ IDE with a project named 'Lab02-2022E126'. The project structure in the left pane includes 'Sources' and 'main.cpp'. The main.cpp file contains the following code:

```
1 // MALHARA R.M.Y.S
2
3 // 2022/E/126
4
5 // EC2010
6
7 //Group: C
8
9 // Lab: 02
10
11 // Program Description: [insert brief description here]
12
13 // Certificate of Authenticity:
14
15 // I certify that the code in the method function main of this project
16
17 // is entirely my own work.
18
19 #include <iostream>
20
21 using namespace std;
22
23 int main()
24 {
25     double length = 10;
26     cout<< length++ <<endl;
27     cout<< ++length <<endl;
28     cout<< ++length;
29     return 0;
30 }
```

The execution output at the bottom shows the program running successfully, returning 0 (0x0) with an execution time of 0.094 s. The output also includes a prompt to press any key to continue.

```
10
12
13
Process returned 0 (0x0)   execution time : 0.094 s
Press any key to continue.
-
```

02)

Code :-

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int Balance = 100000;
```

```
    int choise;
```

```
    int withdra_amount;
```

```
    int deposit;
```

```
    cout<<"1.Check Balance"<<endl;
```

```
    cout<<"2.Withdraw Money"<<endl;
```

```
    cout<<"3.Deposit Money"<<endl;
```

```
    cout<<"4.Exit"<<endl;
```

```
    cout<<"Enter your choise (1-4):";
```

```
    cin>>choise;
```

```
    if (choise == 1){
```

```
        cout<< "Your balance: $"<<Balance<<endl;
```

```
    }
```

```
    else if (choise == 2){
```

```
        cout << "Enter the amount to withdraw:";
```

```
        cin >> withdra_amount;
```

```
        Balance = Balance - withdra_amount;
```

```
        cout<<"Withdrawal successful. Remaining balance: $"<<Balance<<endl;
```

```
    }
```

```
    else if (choise == 3){
```

```
        cout<<"Enter the amount to deposit:";
```

```
        cin>>deposit;
```

```
        Balance = Balance + deposit;
```

```
        cout<<"Deposit successful. New balance: $"<<Balance<<endl;
```

```
    }
```

```
    else if (choise == 4){
```

```
        cout<< "Exiting the ATM." <<endl;
```

```
    }
```

```
}
```

## Outputs:-

C:\Users\2022e126\Downloads\Lab02\Lab02-2022E126\bin\Debug\Lab02-2022E126.exe

```
1.Check Balance
2.Withdraw Money
3.Deposit Money
4.Exit
Enter your choise (1-4):1
Your balance: $100000
```

```
Process returned 0 (0x0)   execution time : 8.190 s
Press any key to continue.
```

C:\Users\2022e126\Downloads\Lab02\Lab02-2022E126\bin\Debug\Lab02-2022E126.exe

```
1.Check Balance
2.Withdraw Money
3.Deposit Money
4.Exit
Enter your choise (1-4):2
Enter the amount to withdraw:5500
Withdrawal successful. Remaining balance: $94500
```

```
Process returned 0 (0x0)   execution time : 13.962 s
Press any key to continue.
```

C:\Users\2022e126\Downloads\Lab02\Lab02-2022E126\bin\Debug\Lab02-2022E126.exe

```
1.Check Balance
2.Withdraw Money
3.Deposit Money
4.Exit
Enter your choise (1-4):3
Enter the amount to deposit:6000
Deposit successful. New balance: $106000
```

```
Process returned 0 (0x0)   execution time : 6.228 s
Press any key to continue.
```

C:\Users\2022e126\Downloads\Lab02\Lab02-2022E126\bin\Debug\Lab02-2022E126.exe

```
1.Check Balance
2.Withdraw Money
3.Deposit Money
4.Exit
Enter your choise (1-4):4
Exiting the ATM.
```

```
Process returned 0 (0x0)   execution time : 3.016 s
Press any key to continue.
```

03)

Code :-

```
#include <iostream>

using namespace std;

int main()
{
    double r;
    double h;
    double v;
    double pi=3.14;

    cout<<"Enter the radius of a Circular cone:";
    cin>>r;

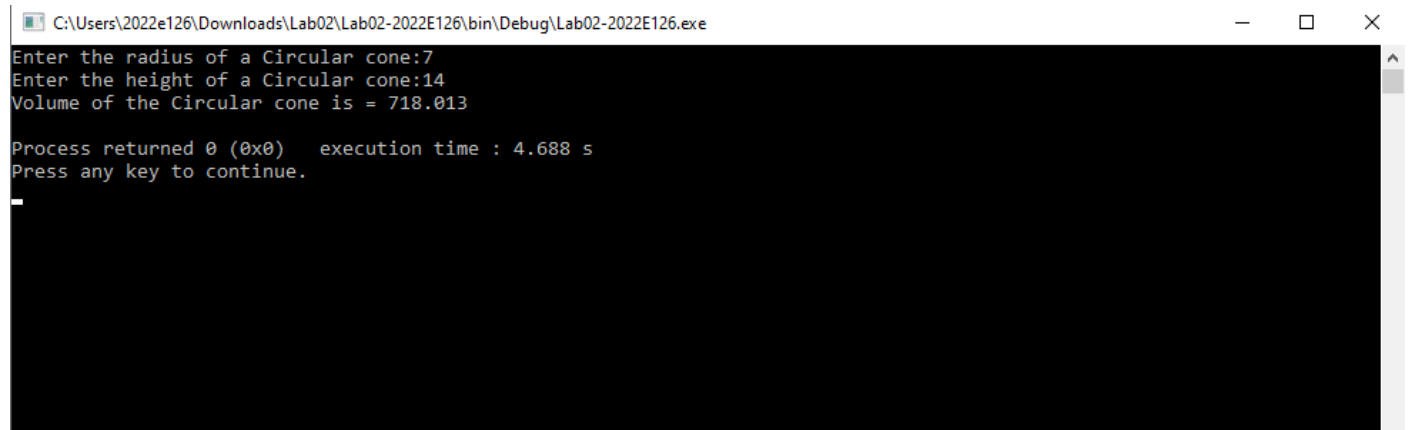
    cout<<"Enter the height of a Circular cone:";
    cin>>h;

    v=(pi*r*r*h)/3;

    cout<<"Volume of the Circular cone is = "<<v<<endl;

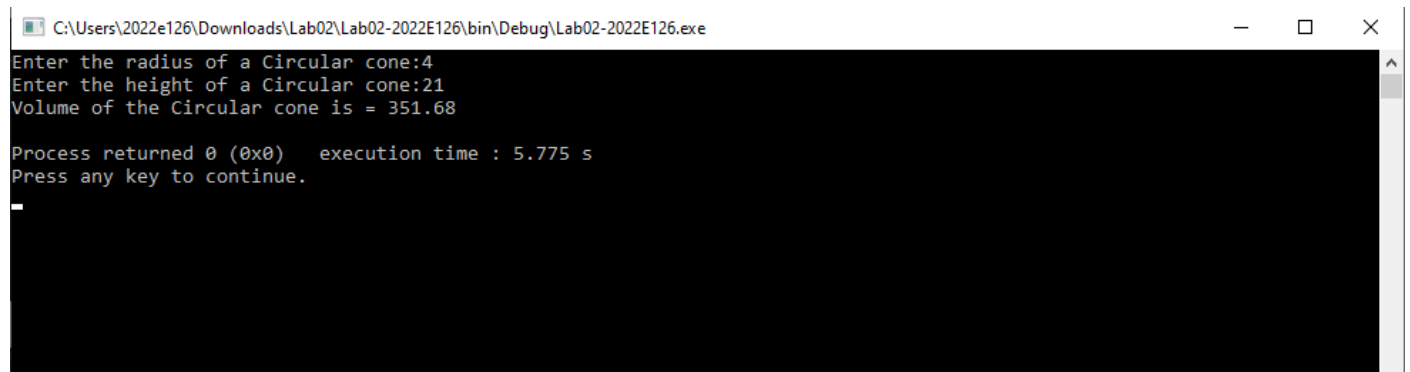
}
```

Outputs :-



```
C:\Users\2022e126\Downloads\Lab02\Lab02-2022E126\bin\Debug\Lab02-2022E126.exe
Enter the radius of a Circular cone:7
Enter the height of a Circular cone:14
Volume of the Circular cone is = 718.013

Process returned 0 (0x0)   execution time : 4.688 s
Press any key to continue.
```



```
C:\Users\2022e126\Downloads\Lab02\Lab02-2022E126\bin\Debug\Lab02-2022E126.exe
Enter the radius of a Circular cone:4
Enter the height of a Circular cone:21
Volume of the Circular cone is = 351.68

Process returned 0 (0x0)   execution time : 5.775 s
Press any key to continue.
```