



राष्ट्रीय प्रौद्योगिकी संस्थान दिल्ली
National Institute of Technology Delhi
(An autonomous Institute under the aegis of Ministry of Education, Govt. of India)

Object Oriented Programming

Assignment 1

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Group : 1

Q1 . Write a basic c++ program to declare some data types like integer, string, long, double and accept the input for that variables through user.

Code:

```
1  #include <iostream>
2
3  using namespace std;
4
5  int main()
6  {
7
8
9      int num;
10     string name;
11     long double double_value;
12     double no;
13
14     cout<<"Enter a integer :";
15     cin>>num;
16     cout<<"Enter a string  :";
17     cin>>name;
18     cout<<"Enter a long double value :| ";
19     cin>>double_value;
20     cout<<"Enter a Double value :";
21     cin>>no;
22     cout<<"Integer      : "<<num<<endl;
23     cout<<"String       : "<<name<<endl;
24     cout<<"LongDouble  : "<<double_value<<endl;
25     cout<<"Double      : "<<no<<endl;
26
27
28
29     return 0;
30 }
```

Output:

```
D:\oops\assignment_1\lab1_01.exe
Enter a integer :10
Enter a string :Sowmyakranthi
Enter a long double value :630953.8907
Enter a Double value :630.95
Integer      : 10
String       : Sowmyakranthi
LongDouble  : 630954
Double      : 630.95

Process returned 0 (0x0)   execution time : 27.924 s
Press any key to continue.
-
```

Q 2 . Write a c++ program to declare a string variable with your name as input and print the ASCII value of your name in decimal.

Code:

```
1  #include <iostream>
2
3  using namespace std;
4
5  int main()
6  {
7
8      string name ;
9      cout<<"Enter your name "<<endl;
10     cin>>name;
11     for(int i=0;i<name.length();i++)
12     {
13         cout<<"      "<<name[i]<<" ASCII VALUE : " <<int(name[i])<<endl;
14     }
15
16
17     return 0;
18 }
19
```

Output:

```
D:\oops\assignment_1\lab1_02.exe
Enter your name
Sowmyakranthi
S ASCII VALUE : 83
o ASCII VALUE : 111
w ASCII VALUE : 119
m ASCII VALUE : 109
y ASCII VALUE : 121
a ASCII VALUE : 97
k ASCII VALUE : 107
r ASCII VALUE : 114
a ASCII VALUE : 97
n ASCII VALUE : 110
t ASCII VALUE : 116
h ASCII VALUE : 104
i ASCII VALUE : 105

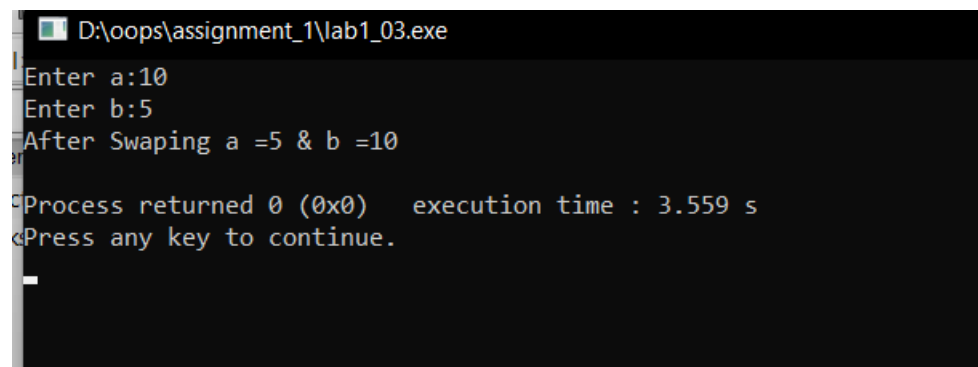
Process returned 0 (0x0)   execution time : 4.027 s
Press any key to continue.
```

Q 3. write a c++ program to swap two numbers without using the third or any extra variable

Code:

```
1  #include <iostream>
2
3  using namespace std;
4
5  int main()
6  {
7      int i,j,temp;
8      cout<<"Enter a:";
9      cin>>i;
10     cout<<"Enter b:";
11     cin>>j;
12     temp=i;
13     i=j;
14     j=temp;
15     cout<<"After Swaping a ="<<i<<" & b ="<<j<<endl;
16     return 0;
17 }
18
```

Output:



The screenshot shows a terminal window titled "D:\oops\assignment_1\lab1_03.exe". The user enters "10" for "Enter a:" and "5" for "Enter b:". The output is "After Swaping a =5 & b =10". Below this, it says "Process returned 0 (0x0) execution time : 3.559 s" and "Press any key to continue." followed by a cursor.

Without Using Third Variable:

```
lab1_03_without_3rdvariable.cpp X
D: > oops > assignment_1 > lab1_03_without_3rdvariable.cpp > main()
1  #include <iostream>
2
3  using namespace std;
4
5  int main()
6  {
7      int a,b;
8
9      cout<<"Enter a :";
10     cin>>a;
11
12     cout<<"Enter b :";
13     cin>>b;
14
15
16     a=a+b;
17     b=a-b;
18     a=a-b;
19
20     cout<<"After Swapping a = "<<a<<"and b ="<<b<<endl;
21
22     return 0;
23 }
24
25
```

Output:

```
{ .\lab1_03_without_3rdvariable }
Enter a :5
Enter b :10
After Swapping a = 10and b =5
PS D:\oops\assignment_1>
```