Object Oriented Programming

Assignment 1

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Year   *: 2nd year*

Semester   *:4th Sem*

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:

```cpp
#include <iostream>

using namespace std;

int main()
{

    int num;
    string name;
    long double double_value;
    double no;

    cout<<"Enter a integer :";
    cin>>num;
    cout<<"Enter a string   :";
    cin>>name;
    cout<<"Enter a long double value :" ;
    cin>>double_value;
    cout<<"Enter a Double value :";
    cin>>no;
    cout<<"Integer     : "<<num<<endl;
    cout<<"String      : "<<name<<endl;
    cout<<"LongDouble : "<<double_value<<endl;
    cout<<"Double      : "<<no<<endl;


    return 0;
}
```

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:

```cpp
#include <iostream>

using namespace std;

int main()
{

    string name ;
    cout<<"Enter your name "<<endl;
    cin>>name;
    for(int i=0;i<name.length();i++)
    {
        cout<<"    "<<name[i]<<" ASCII VALUE : " <<int(name[i])<<endl;
    }


    return 0;
}
```

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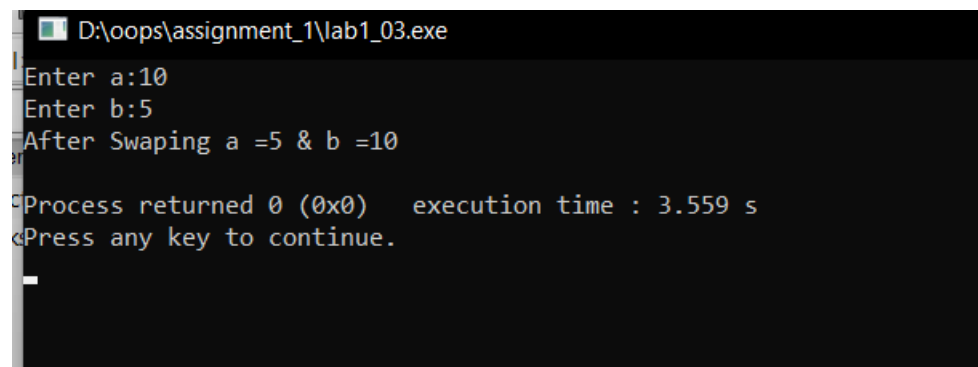
Q 3. write a c++ program to swap two numbers without using the third or any extra variable

Code:

```cpp
#include <iostream>

using namespace std;

int main()
{
    int i,j,temp;
    cout<<"Enter a:";
    cin>>i;
    cout<<"Enter b:";
    cin>>j;
    temp=i;
    i=j;
    j=temp;
    cout<<"After Swaping a ="<<i<<" & b ="<<j<<endl;
    return 0;
}
```

Output:

```
D:\oops\assignment_1\lab1_03.exe

Enter a:10
Enter b:5
After Swaping a =5 & b =10

Process returned 0 (0x0)   execution time : 3.559 s
Press any key to continue.
```

Without Using Third Variable:

```cpp
#include <iostream>

using namespace std;

int main()
{
    int a,b;

    cout<<"Enter a :";
    cin>>a;

    cout<<"Enter b :";
    cin>>b;


    a=a+b;
    b=a-b;
    a=a-b;

    cout<<"After Swapping a = "<<a<<"and b ="<<b<<endl;

    return 0;
}
```

Output:

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