**LALITPUR ENGINEERING COLLEGE**

**DEPARTMENT OF COMPUTER ENGINEERING**

**SUBJECT: OBJECT ORIENTED PROGRAMMING IN C++**

**LABSHEET-1**

**Objective:** To familiarize the students with basics C++syntax.

**Theory:**

In C programming the basic header file is **stdio.h** but instead in C++ it is **iostream.h**

**iostream** :- Header that defines the standard input/output stream objects(**cout** and **cin** are objects that are defined in **iostream**)

In C++ instead of **printf ()** and **scanf ()** we use **cout** and **cin** respectively

**using namespace std**: When you use **using namespace std;** you are instructing C++ compiler to use the standard C++ library. If you don't give this instruction, then you will have to use **std::** each time you use a standard C++ function/entity.

Example: If you have not used **using namespace std;** in beginning, instead of using **cin, cout** you have to use **std::cin, std::cout** on everywhere in program where you use cin, cout

**Syntax of cin:**

cin>>variable; //for single variable input

cin>>v1>>v2>>v3; //for taking 3 variable as input in single line

**Syntax of cout:**

cout<<variable<<endl; //For displaying variable value

**Sample Program (Display “Hello World”)**

**#include <iostream>**

**#include<conio.h>**

**using namespace std;**

**int main()**

**{**

**cout<<”Hello World“<<endl;**

**getch();**

**return 0;**

**}**

**Structure :** Structures are a way of storing many different values in variables of potentially different types under the same name. This makes it a more modular program, which is easier to modify because its design makes things more compact.

**Syntax:**

struct structname

{

Data members

. . . . . . . .

}s1,s2,s3;

int main()

{

. . . . . .

. . . . . .

}

**Programs:**

1. Write a program in C++ to compute area of trianagle.
2. Write a program in C++ to compute area of triangle using following user defined function type.
3. with arguments with return type
4. with arguments no return type
5. without arguments without return type
6. without arguments with return type

[area=sqrt(s(s-a)(s-b)(s-c)); where s=(a+b+c)/2]

1. Write a program in c++ to read the record of a student (name,address,roll) and display the record using structures in c++.
2. Rewrite the above questions using member functions instructures.