

OBJECT ORIENTED PROGRAMMING **LAB ASSIGNMENT -1**

(Topics – Basics of C++, Classes and Objects)

Programming Questions

1. Write a program (WAP) to display "Hello World" on console display. WAP to implement the following control characters:
‘\n’ is for new line, or you can use *endl* – cout<<endl<<“message”;
‘\t’ is for tab ; ‘\a’ is an alarm sound; ‘\r’ is carriage return to go to the beginning of the current line
2. Write a C++ program that will ask for a temperature in Celsius and display it in degree Fahrenheit.[F=9C/5+32]
3. WAP to demonstrate for, while, do-while (with all possible variations), like for loop can be demonstrated without giving initialization in for construct or without giving increment in for construct.

Sample:

```
for (int i=0; i<10; i++)
```

```
i=0
```

```
for (; i<10; i++)
```

```
i=0
```

```
for (; i<10;)
```

```
i++
```

4. Create a structure in C++ containing the details of Students as details below and a main function to execute the structure.

Data Members(properties):

*Name
Roll No
Degree
Hostel
CurrentCGPA*

Member Function(behavior):

*addDetails();
updateDetails();
updateCGPA();
updateHostel();
displaydetails();*

5. Differentiate between private and public access/scope. Perform the question no. 4 with class instead of structure with having the data members private and some member functions in private scope and some in public scope.
6. Create a code snippet that illustrates the following:
 - a. Calling of private member functions inside public member function
 - b. Access private member functions inside public member function
7. Define a class named **Complex** with properties (real and imaginary) and methods as per following details.

void set () to initialize object values.

void display () to display complex number.

Complex sum (Complex) or **void sum (Complex)** to add two complex numbers (objects of Complex class) and **return complex_number** (object of Complex class) as result.

Properties (real and imaginary) of the code should have private access modifier and member functions should have public access modifier in C++ class.

8. Implement *namespace* in a program to illustrate the use of same name variables and functions in different sections/libraries of the code.