**LALITPUR ENGINEERING COLLEGE**

**DEPARTMENT OF COMPUTER ENGINEERING**

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

**LABSHEET-2**

**Objective:** To familiarize the students with objects and class concepts.

**Theory:**

**Object**: Object are primary run time entities in an object - oriented programming

**Class**: Class is a grouping of objects having identical properties, common behavior and shared relationship

**Syntax:**

class exampleclass

{

private:

Data members

public:

Member functions

};

int main(){

exampleclass obj1;

……………

……………

}

1. WAP in c++ to calculate simple interest from given principle time and rate. Set the rate to 15% as default argument when rate is not provided.

[Hint: function prototype **float interest(float principle, int time, float rate=0.15)**]

1. WAP to define the class in c++ as shown in the class diagram

|  |
| --- |
| Student |
| name  roll  address  percentage |
| input()  display() |

**-input()**: to input initial values

**-display()**: to display the record of students who passed

NB: 45% is pass percentage

1. WAP to define a class **Time** that has 3 data members for hours, minutes and second. Include member functions

**void gettime()**: to input time

**void sum(Time, Time)**: to add 2 different time

**void display()**: to display the resultant time.

|  |
| --- |
| Time |
| hr  min  sec |
| gettime()  sum(Time,Time)  display() |

1. WAP to add two complex numbers passing object as an argument and returning resultant complex number.
2. WAP to create a class **Sample** with 2 float data members and member functions **void getdata()** to input the values and one friend function **float mean(Sample)** to calculate and return mean value.

|  |
| --- |
| Sample |
| value1  value2 |
| getdata()  mean(Sample) |

1. WAP to add 2 private data of two different classes.

[hint: use friend function]