Everest Engineering College

Sanepa-2, Lalitpur

Date of distribution:……..
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Subject: Object Oriented Programming in C++

Lab 3

Title: Object as an function arguments

Objective:

- To be familiar with how to pass an object as an argument and how to return object
- To solve problems by passing object as an argument

Theory:

Object can be passed in two different ways:

1. **Pass-by-value** where a copy of the entire object is passed to the function. Here, any

changes made to the formal object parameters do not affect the actual object parameters.

2. **Pass-by reference** where only the address of the object is transferred to the function. Here, any changes made to the formal object parameters will be reflected in the actual object parameters also.

Lab exercises (please code yourself and show the output to instructor)

1. Write a Program to find sum of two complex number by passing object as an argument.
2. Write a Program to find sum of two complex number by passing and returning object as an argument.
3. Write a program to find sum of two complex number, function call by one object passing second object as function argument and return third object adding two objects. Hint: c3=c1.addComplex(c2);
4. Perform similar operation in above(Que no. 1,2,3) for
   i. Addition of two times with data members hours, minutes and seconds
   ii. Addition of two height with data members feet and inches
5. Create a new class named City that will have two member varibles CityName (char[20]), and DistFromKtm (float).Add member functions to set and retrieve the CityName and DistanceFromKtm separately. Add new member function AddDistance that takes two arguments of class City and returns the sum of DistFromKtm of two arguments. In the main function, Initialize three city objects .Set the first and second City to be Pokhara and Dhangadi. Display the sum of DistFromKtm of Pokhara and Dhangadi calling AddDistance function of third City object.

6. Create a class called Volume that uses three Variables (length, width, height) of type distance (feet and inches) to model the volume of a room. Read the three dimensions of the room and calculate the volume it represent, and print out the result .The volume should be in (feet3) form i.e. you will have to convert each dimension into the feet and fraction of For instance , the length 12 feet 6 inches will be 12.5 ft.