Everest Engineering College
Sanepa-2, Lalitpur

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

Lab-10

Title: Type Conversion

Objective:

- To be familiar with type conversion

Theory:

Introduction to type conversion

- **Basic to class type**
- **Class to Basic type**
- **Class to class type**

With their example and syntax

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

1. Write a program to read Height of person in meter and convert into feet and inches by using suitable type conversion method.
2. Write a program to read height of person in feet and inches and convert into meter by using suitable type conversion method.
3. Write a complete program to convert the polar coordinates into rectangular Coordinates
   i) Using conversion Routine in source class (Hint: using casting operator function)
   ii) Using conversion Routine in destination class(Hint: using constructor)
4. Write a program to convert the rectangular coordinate into polar coordinates
   i) Using conversion Routine in source class
   ii) Using conversion Routine in destination class

Note:

In Exam Question can be asked in this way:
Write a complete program to convert the polar coordinates into rectangular Coordinates.
(Hint: polar-coordinates(radius, angle) and rectangular co-ordinates (x,y) where x=r*cos(angle) and y=r*sin(angle))

(You can use any method here either casting operator function or constructor here)

Practice Questions:

1. Create a class named Memory with member variables to represent bytes, kilobytes, and megabytes. Read the memory value in bytes as a basic data type from the user, and then convert and display it using the user-defined Memory class.
   For example, if the input is:
   m = 108766 (in bytes),
   then the output should be: 1 megabyte 38 kilobytes 177 bytes.
   [Hint: Implement basic-to-class type conversion]

2. Create a class named Memory to represent memory in megabytes, kilobytes, and bytes. Read the values for megabytes, kilobytes, and bytes from the user, and then convert the total memory into bytes as a basic data type.
   For example, if the input is:
   1 megabyte 38 kilobytes 177 bytes,
   then the output should be:
   Total memory in bytes = 108766.
   [Hint: Use class-to-basic type conversion.]
3. Write a program to convert the degree Celsius to Fahrenheit .[Hint: use class to class type conversion method)
4. Write a program that convert kilogram into gram using user define to user define data conversion.(1kg=1000gm)