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Department of Computer Science and Engineering

Object Oriented Programming Lab (14B17CI371)

Lab Exercise-5

Date 16/08/16

[Imp Note: All the programs must be written in C++ with distinguished variable names. If any kind of plagiarism is observed, the punctuality marks (10) will be awarded by zero.]

1. Define a class to represent a bank account, including the following data members:

- Name of the depositors
- Account number
- Type of account
- Balance amount in the account

and member functions:

- To assign initial values
- To deposit an amount
- To withdraw an amount after checking the balance
- To display the name and balance

Write a main program to test the program.

2. Create two classes DM and DB which store the value of the distances. DM stores distances in meters and centimeters and DB in feet and inches. Write a program that can read values for the class objects and add one object of DM with another object of DB.

Use a friend function to carry out the addition operation. The object that stores the results may be a DM object or DB object, depending on the units in which the results are required. The display should be in the format of feet and inches or meters and centimeters depending on the object on display.

3. Create a class called time that has separate int member data for hours, minutes, and seconds. One constructor should initialize this data to 0, and another should initialize it to fixed values. Another member function should display it, in 11:59:59 format. The final member function should add two objects of type time passed as arguments. A main() program should create two initialized time objects (should they be const?) and one that isn't initialized. Then it should add the two initialized values together, leaving the result in the third time variable. Finally it should display the value of this third variable. Make appropriate member functions const.

4. Create two classes, the first holds customer data- specifically, a customer number and zip code. The second, a class for cities, holds the city name, state, and zip code. Additionally, each class contains a constructor that takes arguments to set the field values. Create a friend function that displays a customer number and the customer's city, state, and zip code. Write a brief main() function to test the classes and friend. Save the file as Customer.cpp.