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Department of Computer Science and Engineering

Object Oriented Programming Lab (14B17CI371)

Lab Exercise-4

Date 08/08/16

[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. Write C++ Program to swap two variable using reference variables.
2. Create four integers, four pointers to these integers and four references to them. Store these pointers and references in two arrays and print out the values of four integers using these arrays.
3. Create a class rectangle with attributes length and width. Provide member functions that calculate the perimeter and area of the rectangle. Provide member functions to get the values from users and display the values of member variables. Write a program to test the class.
4. Write a function that accepts two arguments: a string name of a movie and an integer running time in minutes. Provide a default value for the minutes so that if you call the function without an integer argument, the minutes default to 90. Write a main() function that proves you can call the function with a string argument alone as well as with a string and an integer. Save the file as Movie.cpp.
5. Create a structure named *Shirt* that has the public data members *collarSize* and *sleeveLength*. Create a structure named *Pants* that has the public data members *waistSize* and *inSeam*. Write a program that declares one object of each type Shirt and Pants and assigns values to the objects' data fields. Write two overloaded functions named *displayClothingFacts()*. One version of the function takes a Shirt object as an argument; the other version takes a Pants object. Each version displays the facts about the piece of clothing. Your main() function should demonstrate that you can call *displayClothingFacts()* with either type of clothing. Save the file as Shirt.cpp .
6. Define a class named Movie. Include private fields for the title, year, and name of the director. Include three public functions with the prototypes void Movie::setTitle(cstring); , void Movie::setYear(int); and void Movie::setDirector(string);. Include another function that displays all the information about a Movie. Write a main() function that declares a movie object named myFavoriteMovie. Set and display the object's fields. Save the file as Movie.cpp.
7. Write a class definition for an order class for a nightclub that contains a table number, a server's name, and the number of patrons at the table. Include a private static data member for the table minimum charge, which is \$4.75. Write a main() function that declares no Order objects, but that uses a static member function to display the table minimum charge. Save the file as Order.cpp.