Department of Computer Science & Engineering, NITS
CS212 - Object Oriented Programming Laboratory
Session : January - June 2024
Lab-1: Class, Objects, and Functions

Programming Assignments :

1. Write a function power() to raise a number m to a power n. The function takes a double value for m and int value for n and returns the result correctly. Use a default value of 2 for n to make the function to calculate squares when this argument is omitted. Write a main that gets the values of m and n from the user to test the function. Then using function overloading take an int value for m (same function name), call both the functions in main and check the results.

2. Define a class to represent a bank account. Include the following members:

   Data Members:

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

   Member Functions:

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

   Write a main program to test the program, then modify the class and program for handling 10 customers.

3. Create two classes DM and DB which store the value of 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.

4. (Tic-Tac-Toe) Write a program that allows two players to play the tic-tac-toe game. Your program must contain the class ticTacToe to implement a ticTacToe object. Include a 3-by-3 two-dimensional array, as a private member variable, to create the board. If needed, include additional member variables. Some of the operations on a ticTacToe object are printing the current board, getting a move, checking if a move is valid, and determining the winner after each move. Add additional operations as needed.

Submission Details :

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