Arab Academy of Science and Technology and Maritime Transport

COLLEGE OF ENGINEERING & TECHNOLOGY

Computer Engineering Department

Course: **Object Oriented Programming**
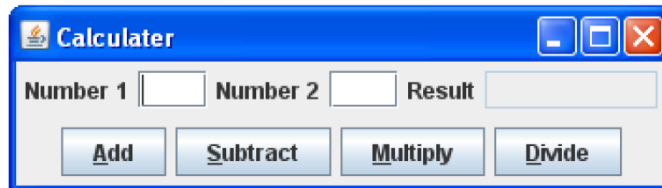
Course Code: **CC316**

Sheet No.: **7**

1. Write a program to perform add, subtract, multiply, and divide operations with the following GUI.

2. Write a program that displays the background color of a panel as black when the mouse is pressed and white when the mouse is released.
3. Write a program that displays at the title of the window, the position of the mouse as the user moves the mouse around the window.
4. Write a program that displays a text field and two buttons labeled "upper case" and "lower case, when the user clicks on the upper case button, the text changes to upper case; when the user clicks on the lower case button, the text changes to lower case. Hint : check class java.lang.String.
5. Write a GUI-based program that analyzes statistics for tennis players. You will retrieve the data from a text file. On each line in the file will be the name of a player, the player's number of wins for the year, and the player's number of losses for the year. Your program should read the file and display the list of players. When the user selects a player, the winning percentage of the player should be displayed in a label. Provide buttons for the following:
   - One button, when clicked, displays which player had the most wins for the year.
   - Another button, when clicked, displays which player had the highest losses percentage for the year.
   - Another button, when clicked, displays how many players had a winning record for the year.
   For this, you should design and code a separate (non-GUI) class encapsulating the tennis statistics analysis, then instantiate an object of that class inside your GUI class and call the various methods as needed.
6. (Create an investment-value calculator) Write a program that calculates the future value of an investment at a given interest rate for a specified number of years. The formula for the calculation is:

   futureValue = investmentAmount * (1 + monthlyInterestRate)years*12

   Use text fields for the investment amount, number of years, and annual interest rate. Display the future amount in a text field when the user clicks the Calculate button, as shown in Figure