**Course: Object Oriented Programming**

**Lab 04**

**Static Variable & Static Method**

**Task 1:**

Create a SavingsAccount class. Use a static data member annualInterestRate to store the annual interest rate for each of the savers. Each member of the class contains a private data member savingsBalance indicating the amount the saver currently has on deposit. Provide member function calculateMonthlyInterest that calculates the monthly interest by multiplying the balance by annualInterestRate divided by 12; this interest should be added to savingsBalance.

Provide a static member function modifyInterestRate that sets the static annualInterestRate to a new value.

Write a driver program to test class SavingsAccount. Instantiate two different objects of class SavingsAccount, saver1 and saver2, balances of 2000.00 and 3000.00, respectively. Set the annualInterestRate to 3 percent. Then calculate the monthly interest and print the new balances for each of the savers.

Then set the annualInterestRate to 4 percent, calculate the next month's interest and print the new balances for each of the savers.

**Task 2:**

Write a JAVA program that creates a class GuessTheWord, where class attributes is a static variable score(int).

In GuessTheWord create a static method, levelOne(with 3 string type arguments). In this method, ask user to input the word, and then you have compare it with words given in method arguments.

If user input = word 1, score will have -1; if user input = word 2, score will have +5 and if

user input = word3, score will have +1.

Now make another class GuessTheWordLevelTwo which will have another static method levelTwo which will give bonus of 10 and print the score and also print “You are Now at LEVEL 2”

In main (GameTest Class) levelTwo will be loaded only when score value will be greater than or equal to 10.