**Lab6**

**Programming Fundamentals CS130 Fall 2022 Total=100**

1. Write a program that uses a priming read to prompt a user for a word. If the user enters a word, the program should print whether it has an even or odd number of characters using If -Else condition check.

Tip: Find out the length of the word using word.length() function.

1. Write a program that will take as input three values for the length of the sides of a right triangle. The program should then determine if this set of numbers is a valid **Pythagorean triple** e.g. (3,4,5). Below are samples of input and outputs for this problem.

*Enter the length of side a:3   
Enter the length of side c:4   
Enter the length of side hypotenuse:5  
A triangle with side a of 3, side b of 4, and a hypotenuse of 5 is a right triangle.*

*Enter the length of side a:6  
Enter the length of side c:8  
Enter the length of side hypotenuse:15  
A triangle with side a of 6, side b of 8, and a hypotenuse of 15 is not a right triangle.*

1. Take values of length and breadth of a rectangle from user and check if it is square or not.
2. A student will not be allowed to sit in exam if his/her attendance is less than 75%.  
   Take following input from user:   
   Number of classes held  
   Number of classes attended.  
   And print  
   percentage of class attended  
   Is student is allowed to sit in exam or not.
3. Write a Java Program to swap two user input numbers using the third variable

Output:

Num1: 4

Num2: 6

before swapping : 4 6

After swapping : 6 4

1. What is control structure? What are the differences between sequential and branching structure?

The way a program flows and goes through steps. Sequential would be going step by step and branching would mean it could result in different steps.