ENGR-1330-2021-3 Computational Thinking and Data Science

Assignment 2

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

R Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Purpose: Practice modifying scripts to accept and use user input.

1. Consider the problem statement: "Calculate the product (multiplication) of any three numbers and report whether the result is an even number or not."
   1. Think about your solution (algorithm) and design a flowchart.
   2. Draw your flowchart (either on paper or in a software (PowerPoint) and attach a screenshot, to your solution.
   3. Based on your pseudocode, write your code in Python.
   4. Test your code for these cases:
      1. 10,2,1
      2. 3,5,7
      3. 4,6,8
   5. What kind of structures did you use? sequential? selection? or both? why?
2. Write a Lottery Script to:
   1. Receive a 10-digit lottery ticket number from user.
   2. if the number is equal to "**2205636346**", print "**You are the lucky winner of 10 Million Dollars!**"
   3. if the number is equal to "**1010101010**", print "**You are the unlucky winner of a bullet! Bang!**"
   4. if the number is any other *even number*, print "**You win a chocolate dipped hotdog!**"
   5. if the number is any other *odd number*, print "**you are odd!**"
3. Write a script to:
   1. Receive an integer from user between 0 to 9,
   2. if the number is **greater than 5** and **divisible by 3**, calculate its third power and print the value with an appropriate statement
   3. if the number is **lower than 5** and **divisible by 2**, calculate its summation with 10 and print the value with an appropriate statement
   4. if the number is **equal to 5**, print **"High Five!"**
   5. else, print the number itself
      1. 6
      2. 4
      3. 5
      4. 0

Upon completion of the exercise save your notebook and responses as a PDF file and upload to Blackboard.