#Class: CSE1321L

#Section: 19

#Term: Spring 19

#Instructor: Kevin Markley

#Name Clay Waddell

#Lab#: 2

Assignment 1

**Problem 1**- Write a pseudocode algorithm that performs the following:

a) Read in 5 separate numbers from the user.

b) Calculate the average of the five numbers.

c) Find the smallest (minimum) and largest (maximum) of the five entered numbers.

d) Write out the results found from steps b and c with a message describing what the results were.

|  |
| --- |
| BEGIN MAIN  PRINT “Please enter a number.”  READ numOne  PRINT “Please enter another number.”  READ numTwo  PRINT “Please enter a third number.”  READ numThree  PRINT “Please enter yet another number.”  READ numFour  PRINT “Please enter one last number.”  READ numFive  PRINT “The average of the numbers that you entered is:”, (numOne + numTwo + numThree + numFour + numFive)/5  PRINT “The largest number you entered was:”, max(numOne, numTwo, numThree, numFour, numFive)  PRINT “The smallest number you entered was:”, min(numOne, numTwo, numThree, numFour, numFive)  END MAIN |

**Problem 2** - Write pseudocode that will add all the even numbers from 0 up to a user defined stopping point (inclusive if even). Output the stopping point, and the sum of all even numbers up to the stopping point (inclusive if even).

|  |
| --- |
| BEGIN MAIN  PRINT “Please enter a number”  READ userIn  IF userIn %2 == 0 THEN  sum ← ((userIn / 2) /2) \* (2 + userIn)  ELSE  sum ← (((userIn - 1) /2) /2) \* (2 + userIn)  ENDIF  PRINT “The sum of all evens is:”, sum  END MAIN |

**Problem 3** - Write a pseudocode algorithm that asks someone how old they are today, and display their current age. Then perform the calculation and display how old they will be in 20 years.

|  |
| --- |
| BEGIN MAIN  PRINT “Please enter your age”  READ userAge  futureAge ← userAge + 20  PRINT “You are”, userAge, “years old. /n”, “In 20 years, you will be”, futureAge  END MAIN |

**Problem 4** - Write a pseudocode algorithm that performs the following task: Ask a user to enter a number. If the number is between 0 and 10, exclusively, write the word “Blue”. If the number is between 10 and 20, exclusively, write the word “Red”. If the number is between 20 and 30, exclusively, write the word “Green”. If it is any other number, write the message “This is not a correct color option”.

|  |
| --- |
| BEGIN MAIN  PRINT “Please enter a number between 1-30”  READ userInput  CASE unseInput of  0 <= userInput >= 10 : PRINT “Your color is Blue!!”  BREAK  10 < userInput >= 20 : PRINT “Your color is Red!!”  BREAK  20 < userInput >= 30 : PRINT “Your color is Green!!”  BREAK  30 < userInput : PRINT “Your number is too high, please try again.”  BREAK  OTHERS: PRINT “You did not enter a number, please try again.”  ENDCASE  END MAIN |

**Problem 5** - Write a pseudocode algorithm to add the prices of an order of fries, a burger, and a drink, calculate the tax (assume 10%), and tell the customer their total. Use the prices shown below for each menu item.

|  |
| --- |
| BEGIN MAIN  burger ← 6  fry ← 3  dink ← 1  order ← burger + fry + dink  tax ← order \* .1  total ← order + tax  PRINT “Burger:”, burger \n,  “Fries:”, fry \n),  “Drink:”, dink \n,  “Tax:”, tax \n,  “Total:”, total  END MAIN |