

CECS 174 – Assignment 7 – While Loops –

Part A – Guessing Game – Have the computer generate a number between 1 and 100, then prompt the user to input a number between 1 and 100. Test that the user's input is within the range, if it isn't then tell them that it is invalid and allow them to continue guessing. Compare the user's number to the computer's number, if the user's number is lower than the computer's, tell them that it is too low. If the number is higher than the computer's, tell them that it is too high. Repeat until the user guesses the number. Keep a record of how many tries it took and display it after the user wins.

Example Output:

```
I'm thinking of a number. Guess a value (1-100): 10
Too Low. Guess again: 50
Too High. Guess again: 33
Too High. Guess again: 20
Too High. Guess again: 15
Too Low. Guess again: 17
Correct! You got it in 6 tries.
```

Part B – Write a program that has two parts, use a switch to allow the user to decide to run either part one or part two. Repeat the program until the user decides to quit.

P1 – Compute Average – Prompt the user to input a series of numbers that they want to compute the average of, but have the user enter the numbers one at a time. Use a sentinel value to allow the user to signify when they are finished inputting numbers. Calculate and display the sum and the average. Make sure to check the user's input for any type of errors.

P2 – Find Maximum – Prompt the user to input a series of numbers that they want to find the maximum of. Have the user enter each number one at a time. Use a sentinel value to allow the user to signify when they are finished inputting numbers. Find and display the highest value they inputted. Make sure to check the user's input for valid entries.

Example Output:

```
Menu:
1. Compute Average
2. Find Maximum
3. Quit
1
Average (Q to quit):
Enter Number: 3
Enter Number: 5
Enter Number: 7
Enter Number: Q
Your Sum is: 15.0
Your Average is: 5.0
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```
Menu:
1. Compute Average
2. Find Maximum
3. Quit
2
Maximum (Q to quit):
Enter Number: 6
Enter Number: 11
Enter Number: x
Invalid Input - Retry
Enter Number: 10
Enter Number: Q
Your Maximum is: 11
```