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CS 31

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Project 5 Report

1. Some obstacles I had to overcome was getting an infinite loop of error messages when the trial word entered was more than 6 characters. I realized I had to make the getline statement receive up to 100 characters, not the MAXWORDS length of 7. I also had difficulty in keeping track of how many bees there were. It was easy to put the priority on flowers, but when there was 2 of the same letter in the mystery word and then one in the test word, it was difficult to keep track of them and make sure only one bee was recorded. In order to do this, I made copies of both cstrings and changed the character to uppercase if it was involved and used the isupper() test to make sure the same characters were not used again.
2. Main function:

Declare and initialize the word list, trialcount, and min and max

Check if word list is valid

Get user input for number of rounds

If number of rounds is positive

While rounds is less than number of rounds

Randomly select mystery word

Print length of mystery word

**playOneRound** and obtain number of trials

Calculate average number of trials

Compare number of trials to get new min and max

Print average, min, and max

playOneRound function:

If number of words or index is invalid

Return -1

Select mystery word and initialize trial word to empty cstring

Declare and intialize trial count

While trial word does not equal mystery word

Get user input for trial word

If trial word length is invalid or uppercase letters exist

Continue while loop to get new input

If trial word is in the word list

**flowers**(mystery word, trial word)

Increment trial count

If trial word is not in list

Continue while loop to get new input

Flowers function:

Declare and initialize flower counter & bee counter

Set longer length variable equal to length of the longer of mystery word or test word

Set shorter length variable equal to the length of the shorter of mystery word or test word

Make copies of the strings

Iterate through the copies of the strings

If character at same index is the same in both cstrings

Increment flower count

Make character at index upper case

Continue

Iterate through longer cstring

If character is uppercase

Continue

Iterate through shorter cstring

If character is uppercase

Continue

Else if character at index of longer cstring equals character at index of shorter cstring

Increment bee count

Make character at the indexes uppercase

Break out of inner for loop

Print out flowercount and bee count

return