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CS 31

Project 5 Writeup

2)

a. Project 5 was genuinely the most difficult project I have worked on in this CS 31 class. The sole reason for this was determining a proper way to calculate the number of bees and flowers. I began by iterating through the trial word, comparing corresponding indexes of the trial word and mystery word. Thus, the number of flowers can be calculated. If there was no matching case, then I directed the logic to an else statement in order to determine if bees were present. On a simple level, this logic was perfect and the project seemed simple. However, after doing more testing with cases in which there are multiple opportunities for bees and flowers, I realized my logic was too simple. Thus, I struggled for hours, trying to use different nested loops, trying to create arrays with the index of flowers and bees, etc. I ended up coming to the solution of creating a copy array in which the flowers and bees are replaced with a space char, meaning no additional counting of those flowers or bees can occur. The other obstacle I overcame was understanding the purposes of getWords, playOneRound, and the main function. Understanding how they work together was just more difficult for me, as the spec is detailed and in a way, confusing.

b. I wrote only two functions – the main function and playOneRound. The main function requires no pseudocode to explain – it transfers words into a cstring, after which the user is prompted for input. Then, the mystery word is generated, and playOneRound is called, allowing the flowers and bees calculation to be determined.

Here is pseudocode for playOneRound.

If position of mystery word is greater than or equal to num of words or num of words < 0 or word position < 0:

Return -1

Loop

Allow user to input word

Iterate through word to determine if word is allowed

If word is already equal to mystery word, return i (return number of tries)

Create copy of words

Iterate through my code – if trial word and mystery are alike, remove a strike

If not, add one

Cout important information