Project 9 - Codle

Concept: The game we decided to develop draws inspiration from the popular game “Wordle,” which gained global popularity. The game revolves around guessing a secret word within 6 attempts. Each day, players are given a new secret word, and after each guess, they receive feedback for each letter. There are two types of feedback: **Yellow**, indicating a correct letter in the wrong position, and **Green**, indicating a correct letter in the correct position.

For our version, we chose to make the secret words specifically related to coding and concepts from the “Nand to Tetris” course. This adds a technical twist to the classic game, making it more engaging for those familiar with programming and computer architecture.

Architecture: Our project consists of these 3 classes and a main method:

Codle class- We initialize the game board and randomly select a secret word. The main function, run, controls the game flow. Inside this function, a loop moves the cursor after each letter the user types, ensuring each letter is printed in the correct position on the board. After the user types a letter, we provide feedback—'Y' represents yellow (correct letter incorrect position), and 'G' represents green (correct position). The game accepts both uppercase and lowercase letters. As in the original game, each round features a new secret word, providing a fresh challenge every time.

wordBank class- We maintain an array of possible words for the secret word. Using the Random class, we implement a random function in which we generate a number between 0 and 15 and return the word in the position of the number we generated. We then use and then use this function to decide the secret word in the Codle class.

LFSR2RAND class- Random class **Copyright (C) 2016, Mark A. Armbrust** with permission to use for educational purposes.

Main- In the Main class, we call the run function from the Codle class to start the game. After the game finishes, we call the dispose method to clean up and close the game.

Motivation: We chose to develop this app because we both enjoy playing "Wordle." It’s a fun and challenging game, and we thought it would be great to create something similar. This project gave us a chance to apply the concepts and terms we’ve learned in the course, and we felt this was the best way to do so.

Link to our video

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