

# Project Proposal

Team: T05G03



**Game description:** Wordle is a game where a word is selected by the computer and the goal of the player is to find out the selected word. The player has a limited number of guesses and, with each guess, information about the word is given to the player. For each letter of the word the player has played: if it doesn't exist on the target word, its background will turn gray; if it exists on the target word, but in a different position, its background will turn yellow; if it exists on the target word in that same position, its background will turn green;

In multiplayer mode, two players start playing the game at the same time, and each one of them only receives info about the number of words the other player is guessing. This game mode, like the normal one, has a guess limit and the winner is decided by the minimum number of word guesses in the end. In the case of a draw, the time taken to finish the puzzle is the deciding factor.

### **Functionalities:**

1. Keep track of the mouse's absolute position on the screen
2. Draw a mouse cursor at the mouse's position
3. Detect mouse clicks
4. Detect keyboard break codes and translate them into the corresponding characters
5. Read possible words from a wordlist provided by the user
6. Keep track of the number of tenths of seconds elapsed since the start of the game
7. Have a graphical user interface that displays the current game state (for singleplayer games)
8. Have a graphical user interface for starting a new single player game
9. Have a graphical user interface for connecting to a multiplayer game
10. Have a graphical user interface that displays the current game state (for multiplayer games)
11. Send and receive messages using the serial port
12. Synchronize two game instances using the serial port
13. Wordle game logic (input a word and modify the game state according to the game rules)

### **Devices used:**

- **mouse:** to choose the desired tile and navigate the game menus
- **graphics card:** to display the graphics of the game
- **timer:** to keep track of the time the user spends playing
- **keyboard:** to input the letters to the game
- **serial port:** to synchronize the two player's wordle games

### **Workplan:**

**week 1:** Functionalities 1, 2, 3, 4, 5, 6 and 7

**week 2:** Functionalities: 8, 10, 11, 12, 13

**week 3:** Functionality 9 and final report