

Programming Project / C++ – Hangman Manager and Player System –

Student 1: Stefania Sandu

Student 2: Mara Tudor

I. Task Description

Student 1 is responsible for managing the game:

- Adding/removing words to the word list
- Viewing the leaderboard and player history

Student 2 is responsible for interacting with the game:

- Playing the hangman game using the available words
- Saving the player's score to the leaderboard

II. Classes Used by the Team

Player: string name, int score

Used to store a player's name and their final score in the leaderboard.

GuessedWord: string guessed, string word

Used to represent the hidden and revealed state of the word during gameplay.

vector<string> wordList – stores the available words from words.txt

vector<bool> guessedLetters – tracks guessed letters

III. File Structure

The following files will be used:

words.txt

List of available words for gameplay (1 per line)

<word 1>

<word 2>

<word 3>

...

leaderboard.txt

Each line contains <player_name>,<score>

IV. Interacting with Executables

Application 1 will offer the following options:

`./app_1.exe add_word <word>`

To add a word to the list of available Hangman words

`./app_1.exe delete_word <word>`

To delete a word from the list

`./app_1.exe view_words`

To view all available words

`./app_1.exe view_leaderboard`

To view all scores saved by previous players

`./app_1.exe view_history <player_name>`

To view all past scores for a specific player

Application 2 will offer the following options:

`./app_2.exe play`

Launches the Hangman game loop. A random word is selected from words.txt.

The player guesses letters until the word is solved or 5 incorrect guesses are made.

Final score is saved to leaderboard.txt

Both apps communicate through shared files:

- words.txt: is written by App1 and read by App2. It's purpose is to supply playable words.
- leaderboard.txt is written by App2 and read by App1. It's purpose is to store and display scores.

This forms a bidirectional flow:

- App1 prepares the game environment
- App2 plays the game and sends back results