Management & Gameplay System

The Hangman Game

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I. Task Description

Student 1 is responsible for managing the word list and player data:

- Adding, deleting, modifying words in the word list (words.txt)

- Viewing the leaderboard (leaderboard.txt)

- Viewing and managing game history (history.txt)

Student 2 is responsible for interacting with the Hangman game:

- Playing the game using a word from words.txt

- Making guesses and updating game progress

- Saving scores to the leaderboard

- Recording game history

II. Data Structures Used by the Team

The following C++ classes will be used:

- Word: std::string text

- Player: std::string name, int score, std::vector<std::string> correctGuesses, std::vector<std::string> wrongGuesses

- Game: std::string currentWord, std::string hiddenWord, int remainingTries

- Date: int day, int month, int year *(optional if adding timestamp to history)*

III. File Structure

The following files will be used:

words.txt

A file where Hangman words will be stored in the form:

<number of words>

word1

word2

...

leaderboard.txt

A file where player names and scores will be stored:

<Player1> <Score>

<Player2> <Score>

...

history.txt

A file where player game history will be stored:

<Player1> <correctCount> <wrongCount>

R correctWord1

R correctWord2

W wrongWord1

...

IV. Interacting with Executables

Application 1: hangman_host.exe

This application is responsible for administering the game.

Commands:

To display all words in the database: *./hangman_host.exe view_words*

To add a new word: *./hangman_host.exe add_word <word>*

To delete a word: *./hangman_host.exe delete_word <word>*

To view all player scores: *./hangman_host.exe view_leaderboard*

To view a specific user's past guesses: *./hangman_host.exe view_history <username>*

Application 2: hangman_player.exe

This application is responsible for playing the Hangman game.

Commands:

./hangman_player.exe play <username>

To start a new game session. The program will:

- Choose a random word
- Process letter guesses
- Update leaderboard and history