

Trivia Game Project - Technical Description

Students

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I. Task Description

Student 1 - Game Engine Developer

- Implement question and answer parsing
- Manage file reading/writing for trivia questions
- Handle game session logic (score tracking, correct/incorrect answers)

Student 2 - Interface & Game Flow

- Handle command line interface interactions
- Manage user sessions
- Display results and scores

II. Data Structures Used by the Team

Classes and Relationships

- Question

- * string category
- * string text
- * vector<string> options
- * int correct_index

- GameSession

- * vector<Question> questions
- * int score
- * int current_question_index

- Player

- * string name
- * int final_score

Composition: GameSession has a vector of Question

Association: Player is associated with a GameSession

III. File Structure

questions.txt

Format:

<number of questions>

<category> <question text> <option1;option2;...> <correct_option_index>

players.txt

Stores player names and scores:

<player_name> <score>

session_log.txt

Tracks game sessions and outcomes:

<session_date>

<player_name> <score>

<question> <correct/incorrect>

IV. Commands Implemented by Applications

Game Engine (game_engine.exe)

`./game_engine.exe load_questions <file_path>`

Loads trivia questions from a file

`./game_engine.exe start_game <player_name>`

Starts a new trivia game session

`./game_engine.exe show_score <player_name>`

Displays the latest score of a player

Game Interface (game_ui.exe)

`./game_ui.exe next_question`

Shows the next question

`./game_ui.exe answer <option_index>`

Submits an answer for the current question

`./game_ui.exe end_game`

Ends the game session and stores results