

COP 5339 Object Oriented Software Design Project

Application Requirements

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Project Title: Exciting Trivia Game

Functional Specification

Upon launching the application, the user will get a splash screen with “Welcome to Exciting Trivia Game” message. Then a game menu will display where the user will enter his or her name and picks a difficulty level (novice, intermediate or expert). Default will be novice. The game menu will have four additional buttons: Start, View Scores, Reset and Exit. The Start, View Scores and Reset buttons will initially be deactivated until the user’s name is provided. Exit will close the application, View Scores will launch a screen with the user’s top 10 saved scores and the corresponding ranking, and Reset will erase all user data and scores. Start continues to begin the game and opens the game screen.

On the upper left corner of the game screen, a message will display, “Tom has entered the game. Jane has entered the game.” to make the user aware of the other simulated players. On the upper right corner will be a tally marking the points earned by each player. On the center of the screen will be a read only large text box that will display a question followed by some choices a, b, c or d. Under the text box, there will be six buttons. One button for each choice of the question, a next question button and an end game button. The user can end the game at any time. The next button will display a trivia question followed by the possible choices. Once the next button is clicked, the button will be disabled until someone gets the answer or everyone has answered incorrectly. Each player can only choose once. The first player to answer correctly gets the point. A message will display on the large text box on the center with the order of the answers submitted by each player and the correct answer. At this point, the next question button is enabled. Once clicked, the large text box will display the next question.

Once the user clicks end game, the end game screen will appear with the scores and ranking. This screen will have one Close button to close the end game screen and return back to the game menu. If the user plays long enough to answer all the questions, the game will end, and the end game screen will appear with the scores and ranking.

Use Cases

UC1. Launch Application

1. User executes the application.
2. System displays a splash screen with the following message:

Welcome to Exciting Trivia Game

3. After the splash screen ends, system displays the game menu with the following items:

Your Name: (a text box)

Change Difficulty Level:

Novice (default)
Intermediate
Expert
Start (initially deactivated)
View Scores (initially deactivated)
Reset (initially deactivated)
Exit

4. User enters his or her name in the textbox and selects “Novice”.
5. All game menu items are activated.

UC1. Launch Application – Variation #1

- 1.1. Start at Step 2.
- 1.2. System detects an existing user’s name and loads the user data. Splash Screen ends.
- 1.3. Continue with Step 5.

UC2. Start a New Game

1. User carries out **UC1. Launch Application** or other use cases which return to the game menu.
2. User select “Start”.
3. System displays the game screen.
4. System displays the following messages in sequence on the upper left corner of the game screen:

<username> has entered the game...
Tom has entered the game...
Jane has entered the game...

5. System displays the current scores (initially zero) of each player on the upper right corner of the game screen.
6. System displays the following message in the center of the screen:

Welcome! Please click “Next” to begin the Exciting Game!

7. System displays the following six options on the bottom of the game screen:

A B C D Next End

UC3. Scoring a Point

1. User carries out **UC2. Start a New Game**.
2. User clicks the “Next” button.
3. System displays a new question following by four answer choices a, b, c or d.
4. User clicks on any of the buttons {a, b, c, d} to select the answer to the question.
5. After all players select an answer or 10 seconds have elapsed, the system will display the answers picked by each player in descending order of quickest to answer along with the correct answer.
6. System will increment the score for the winner of the round and display the updated score on the upper right corner.

UC4. End the Game

1. User carries out **UC3. Scoring a Point**.
2. User clicks on the “End” button.
3. System displays the end game screen showing each player and their scores and ranking, and a “Close” button.
4. User clicks the “Close” button.
5. System displays the game menu.

UC4. End the Game – Variation #1:

- 1.1. Start at Step 1.
- 1.2. All questions are exhausted in the current game.
- 1.3. Continue with Step 3.

UC5. Reset User Data

1. User carries out **UC1. Launch Application** or other use cases which return to the game menu.
2. User selects “Reset”.
3. System displays the following message:

All user data and scores will be erased.
Continue? Yes / No

4. User selects “Yes”.
5. System erases all user data and scores and displays the game menu.

UC5. Reset User Data – Variation #1

- 1.1. Start at Step 3.
- 1.2. User selects “No”.
- 1.3. System displays the game menu.

UC6. View Scores

1. User carries out **UC1. Launch Application** or other use cases which return to the game menu.
2. User selects “View Scores”.
3. System displays the top 10 saved scores and rankings.
4. User is prompted to:

Press Enter

5. System displays the game menu.

UC7. Change Difficulty Level

1. User carries out **UC1. Launch Application** or other use cases which return to the game menu.
2. User selects “Change Difficulty Level”.
3. User is prompted to enter new level:

Difficulty Level:
Novice

Intermediate

Expert

4. The difficult level is changed.
5. System displays the game menu.

UC8. Exit the Application

1. User carries out **UC1. Launch Application** or other use cases which return to the game menu.
2. User clicks the “Exit” button.
3. The application closes.

Revision History

[illegible]