

User Requirements Specifications Analysis

Targeted users

The game targets a wide audience of different age groups and backgrounds, including:

1. students
2. passionate learners
3. adults
4. teachers

Wants and needs analysis

1. **Content:** Solely educationally centralized, suitable for all kinds of users.
2. **Needs/expectations:** Smooth user interaction:
 - chooses an educational category
 - chooses a difficulty level (available levels are: *easy, medium and master*)
 - marks an answer from four possible options
 - gets inform about the right answer

Functional requirements

Game features: To feature multiple-choice questions, level difficulty, category, tracking progress, instant feedback, scoring system and educational explanation per question.

#multiple-choice: User has to choose between four possible answers, where only one is correct

#level-difficulty: There are three possible levels, and based on the user's choice, the questions are tailored.

#category: Based on chosen category, the questions are being tailored for this specific category.

#progress: The game tracks the user's progress as he/she advances every question.

#feedback: After completion the game provides overall feedback.

#scoring: Every question answered correctly gives one point.

#educational-explanation: There is extra information for every question.

Non-functional requirements

#usability: Intuitive design, easy for navigation

#performance: The game should load under acceptable timeframe.

#maintanability and scalability: The project structure should be easily maintainable for updating and further extending.

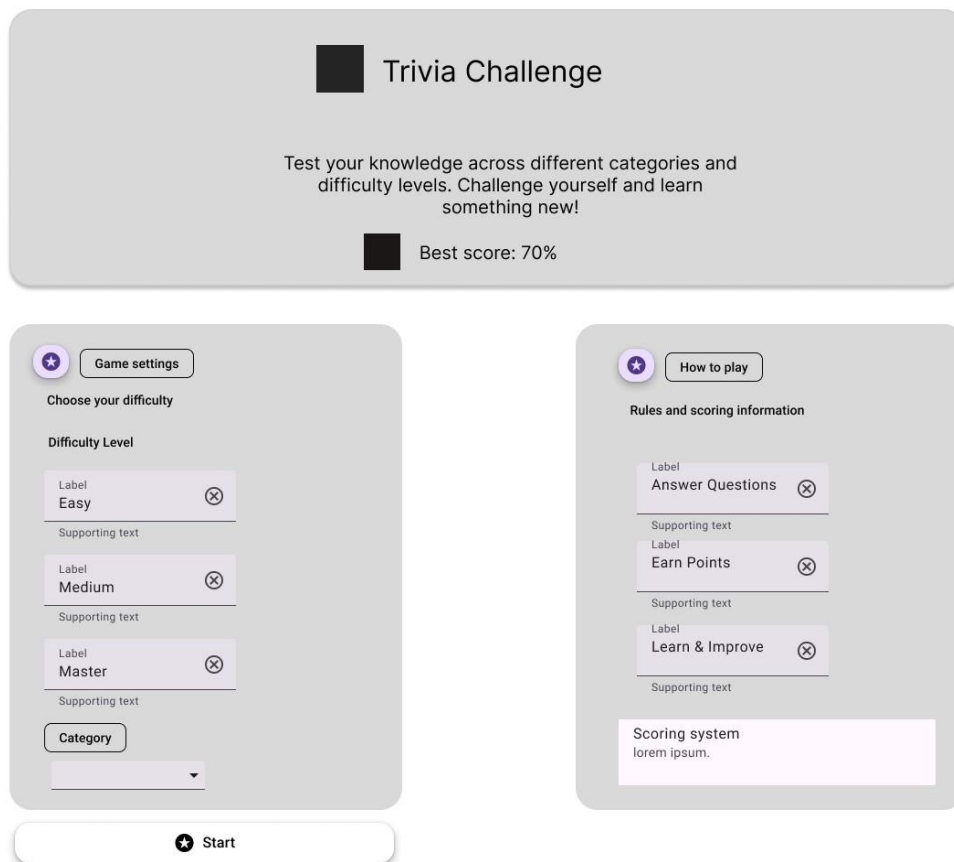
Technical requirements

- **Compatibility:** Compatible with Windows and android.
- **Integration:** To be integrated with a game engine and MySQL database system.

Designing guide

- Designing, sketching and prototyping is done using Figma software, which ensures smooth integration later. Moreover, it provides fast prototyping and pre-build assets for faster visualization.

Wireframe of the game menu:



Explanation:

The menu consists of three separate sections/components. One section for *theme introduction*, a section for the *game settings*, where the levels and the category are listed, and a section for the *game rules* and *scoring system*, explained stepwise. At the end there is a button for starting new game.

Wireframe of the question part:

The wireframe shows a header with a dark square icon and the title "Trivia Challenge". Below the title is a subtitle "Test your knowledge across different categories!". The main content area is divided into two sections. The top section, labeled "Question 1 of 5" and "0/5 current Score", contains a progress bar. The bottom section, labeled "Random question", contains two dropdown menus for "Category" and "Level". Below these are four text input fields labeled "A) Answer", "B) Answer", "c) Answer", and "d) Answer". At the bottom right is a "Next" button with a right arrow icon.

Explanation:

The wireframe consists of two main sections, which are the *score* and *question* sections. On the first one (score section) to the user are displayed the number of remaining questions, and the current score. On the second one (question section) a chosen category and level are displayed as well as the question itself with the possible options (only one is correct).

Wireframe of the result:

The wireframe shows a header with a dark square icon and the title "Trivia Challenge". Below the title is a subtitle "Test your knowledge across different categories!". The main content area is a single section titled "Game Complete!". Below the title is a subtitle "You've finished all the questions". The main content displays "1/3" and "33%". Below this is a "Performance summary" section with two buttons: "1 correct" and "2 incorrect". Below the buttons is a "Recommendation:" section with the text "Keep learning! Consider studying these topics more and take your time with each question." At the bottom are two buttons: "Play again" and "Back to menu".

Explanation:

The result wireframe consists of only one section, where a general message for game completion is displayed, a snapshot of correctly answered questions and overall percentage of achievement. A performance summary is also present followed by a recommendation and navigation buttons.