

How knowledgeable are you ?

Requirements Specification and Analysis Document

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SCIENCE AND
ENGINEERING

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REQUIREMENTS SPECIFICATION AND ANALYSIS DOCUMENT

1. Introduction

How knowledgeable are you is a mobile game application. In this game application, you can measure your own knowledge, play for fun in your spare time, play to learn new information. In the game, you are asked questions on the topic you choose and your score increases in line with the questions you know. You can use different one-right jokers for questions you do not know or have guesses. The game is an application that is very easy-to-use and provides competition , knowledge and entertainment to the user.

1.1. Purpose of the System

The use of phone games has increased considerably nowadays. People waste a lot of time these days. While waiting for something somewhere, using public transport on the road, during work breaks, when there is nothing to do at home, and in many other places. How knowledgeable are you here for them. It allows people to spend time without getting bored. It provides entertainment to people with its constantly different and new questions, questions on different subjects, and its point system, which intensifies the competition among people. Even if they have a job, they can take a break from the game and then continue.

1.2. Scope of the System

How knowledgeable are you is a game application made so that people can compete with themselves and with their friends and have a pleasant time. Our game aims to enable people to both develop their own culture and gain new information by using their knowledge. In addition, thanks to the interfaces used, the program has been designed to be used by people of all ages. And also aim to reach wide audience by releasing the game on the Android (Google Play) platform.

1.3. Objectives and Success Criteria of the Project

How knowledgeable are you's, its main purpose is to be a popular, fun and preferred information game application by people in a short time. I aim for users to enjoy and enjoy the game they play. It will be easily understood thanks to the user-friendly interface and the variety of questions. The application will be fast and precise and there will be no delays. My success

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criterion is to successfully complete all the works that I have set as my goal, adhering to my schedule.

1.4. Definitions, Acronyms, and Abbreviations

RAD : Requirement Analysis Document

APP : Application

FR : Functional Requirements

G : Game

Info : Information

1.5. Overview

There are four main titles in the RAD. The introduction, proposed system, glossary, and references are among them.

The project's goals and expectations are described in this section, which comes first in the introductory section, which also offers brief explanations about the project.

Second, there are four sections in the proposed system. They include an overview, system models, functional needs, and nonfunctional requirements. We described the functions of the system in the overview section. We discussed the system's characteristics and functions in the section on the functional requirements. We discussed the system's usability, dependability, performance, supportability, implementation, interface, packaging, legal restrictions, and other limitations in the nonfunctional requirements. We discussed and displayed use cases, scenarios, object models, user interface (Mockups), and dynamic models in the section on system models.

The Glossary section, which makes up the third half, explains the roles of the users in light of the project's use cases.

The References section is the last section of the RAD document, where we list the websites and documents we used to create the project.

2. Proposed System

- Today, knowledge game applications have lost their creativity, all games ask the same question types and the same questions. People complain about answering the same questions and not seeing any change. How knowledgeable are you will enter the game application industry from a different direction. The questions in the given topics will be creative questions that are not found in any other game, apart from that, there will be different jokers than the classic wild card rights. Therefore, it will be a user-oriented

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game. Also this project creates a new mobile game environment. This environment allows people to interact with their friends using their knowledge.

2.1. Overview

The RAD document consists of four main titles. These are introduction, proposed system, glossary and references.

First, in the introduction section, it contains brief explanations about the project and I have explained the aims and expectations of the project in this section.

Secondly, the proposed system section includes four parts. These are overview, functional requirements, nonfunctional requirements and system models. In the overview part, I explained the system's functions. In the functional requirements part, I mentioned the system's features and functions. In the Nonfunctional requirements, I mentioned the usability, reliability, performance, supportability, implementation, interface, packaging, legal and other constraints of the system. In the System models part, I described and showed use cases, scenarios, object models, user interface (Mockups) and dynamic models.

Third part is the Glossary section, I explained the functions of the users according to the use cases of the project.

The last part of the RAD document is a References; I showed the websites and documents we used while developing the project.

2.2. Functional Requirements

Requirement ID	Requirement Statements	Use Case Names
FR01	As a user, I would like to join into the system so that I can start playing game. Acceptance Criteria: *User can choose their username. *User can upload a profile picture. *User can click the save button. *User can see that he/she started game successfully.	Login

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FR02	<p>As an end user I would like to log out from my session in order to create a new nickname or new nickname for leaderboard.</p> <p>Acceptance Criteria:</p> <ul style="list-style-type: none"> *Users can click the logout button. *Users will be directed to the registration page if successfully logged out. 	Logout
FR03	<p>As an end user I would like to delete my existing nickname.</p> <p>Acceptance Criteria:</p> <ul style="list-style-type: none"> *Users can click the delete nickname button. *Users are redirected to the home page if their nickname is successfully deleted. 	DeleteNickname
FR04	<p>As an end user, I would like to start game immediately.</p> <p>Acceptance Criteria:</p> <ul style="list-style-type: none"> *User should click the start button. *Users should entered nickname. *After clicking the start button user will pick genre of the questions then game will start. 	StartGame
FR06	<p>As an end user, I would like to change audio and theme settings.</p> <p>Acceptance Criteria:</p> <ul style="list-style-type: none"> *Users should click the settings button. 	Settings
FR07	<p>As an end user I would like to check people points and leaderboard.</p> <p>Acceptance Criteria:</p> <ul style="list-style-type: none"> *Users should click the leaderboard button. 	Leaderboard
FR08	<p>As an end user , I want to pick genre of questions.</p> <p>Acceptance Criteria:</p> <ul style="list-style-type: none"> *Users should click the start button. *Users should click on the button of the desired genre from appear in front of him/her. 	PickGenre

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FR09	As an end user I would like answer the question. Acceptance Criteria: * The game must have started and the genre of question he/she wanted came. *User should clicks the button of the selected answer.	SelectAnswer
FR10	As an end user I would like to use my 50/50 joker. Acceptance Criteria: *User must be facing the question in the game. * Users should click the jokers button. * Then user should click the 50/50 button.	Use Joker 1 (50/50)
FR11	As an end user I would like to use my phone to a friend joker. Acceptance Criteria: *User must be facing the question in the game. *Users should click the jokers button. *Then user should click the give me the answer button.	Use Joker 2 (Give me the answer)
FR12	As an end user I would like to use my ask the audience joker. Acceptance Criteria: *User must be facing the question in the game. * Users should click the jokers button. * Then user should click the ask the audience button.	Use Joker 3 (Ask the audience)
FR13	As an end user I would like to see my score. Acceptance Criteria: *User must have started the game. *User should click the button Display Score.	DisplayScore
FR14	As a user I would like to stop the game. Acceptance Criteria: *User must have started the game. *The user should press the stop button on the top right of the game interface.	StopGame
FR15	As a user I would like to quit from game. Acceptance Criteria: *User should click quit game button.	QuitGame

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	*If user in game , first press the stop button on the top right of the game interface then click on the quit game button.	
FR16	As a user I would like to restart game. Acceptance Criteria: * User must have started the game. *The user should press the stop button on the top right of the game interface. *User should click on restart game button.	RestartGame
FR17	As a user I would like to return main menu. Acceptance Criteria: * The user should press the stop button on the top right of the game interface. *User should click the back to main menu button.	BackToMainMenu
FR18	As a user I would like to change my nickname. Acceptance Criteria: *Users should click on the profile button. *User should be click the edit nickname button. *User should be able to change his/her nickname and save it.	EditNickname

2.3. Nonfunctional Requirements

2.3.1 Usability

- Users of my program should be able to use all the game's features with ease because of its straightforward, user-friendly design.

2.3.2 Reliability

- My system keeps private user information on the database, I will use authentication system for nicknames and their personal information.

2.3.3 Performance

- In my design, I proposed users to complete actions in 3-5 seconds. System using the Unity platform with C# so that we can maximize the performance.

2.3.4 Supportability

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- I designed the How Knowledgeable are you to be able to update to add new functionalities if any changes are required.

2.3.5 Implementation

- I am implementing my project as an mobile application, I use MySQL as database , Unity , C# as my coding language and Visual Studio for IDE.

2.3.6 Interface

- Users must enter nickname to access the application.
- Users who log into the game with a nickname can use every feature of the application and start the game whenever they want.

2.3.7 Packaging

- My project is an android application where users can download to their device via the Google Play Store.

2.3.8 Legal

- All contents mentioned in the project are protected by copyright law.
- How knowledgeable are you is available for the all type of users.

2.3.9 Other Constraints

- My project creates a new mobile game environment. This environment allows people to interact with their friends using their knowledge.
- The use of How knowledgeable are you may incur costs for the user. Although all members can play the game for free, sometimes people who want to use extra jokers in the game may pay a fee.

2.4. System Models

2.4.1 Scenarios

Scenario Name

1) How Can I Reach the Game? (Login)

Participating Actors

Zoe: Visitor

Flow of Events

1. Zoe heard about How knowledgeable are you from his parents and she wants to try it.
2. So she downloads the game application from android store and accesses opens the game.
3. She needs to set a nickname before reaching the menu.
4. After she successfully sets nickname , she reaches the menu.

Scenario Name

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2) How Can I play With a Different Nickname? (Change Nickname)

Participating Actors

Zoe: User

Flow of Events

1. Zoe has already set his nickname but she wants to change her nickname.
2. So she goes to the main page and clicks to the profile button.
3. In the profile page she clicks the edit nickname button.
4. After entering her new nickname , she saves her nickname by pressing the save button.

Scenario Name

3) I Want To Delete My Account! (DeleteAccount)

Participating Actors

Zoe: User

Flow of Events

1. Zoe has already registered the game with his nickname but she wants to delete her nickname.
2. So she goes to the main page and clicks the profile button.
3. In the profile page she clicks the delete my nickname button under the page.
4. After clicking delete my nickname buton , enters his nickname correctly and press delete my nickname button again.
5. After successfully deleting her nickname, she is directed to the nickname selection page.

Scenario Name

4) I want to adjust the sound levels of the game's music and sound effects. (AudioSettings)

Participating Actors

Zoe: User

Flow of Events

1. Zoe has already join the game menu with his nickname but she wants to adjust the sounds.
2. So she goes to the settings by clicking settings button.
3. In the settings page she clicks can adjust the game's music and sound effects.

Scenario Name

5) I want to see the score rankings of the game. (Leaderboard)

Participating Actors

Zoe: User

Flow of Events

1. Zoe has already join the game menu with his nickname , now she wants to see leaderboard.
2. So she goes to the leaderboard by pressing leaderboard button.

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3. On the Leaderboard page, she can see which players get how many points, how many questions they know correctly, and their names by rankings.

Scenario Name

*6) I want to answer questions in the field of sports , how can I choose the question type ?
(PickGenre)*

Participating Actors

Joe: User

Flow of Events

1. Joe wants to pick type of questions before playing game.
2. So he clicks the play game button.
3. On the opening page , he clicks on the 5 question types that appear in front of him.
4. This way he picked sport questions for his current game.

Scenario Name

7) I want to start the game quickly (StartGame)

Participating Actors

Joe: User

Flow of Events

1. Joe has already joined game with his nickname and reach the main menu.
2. So he clicks the play game button.
3. On the window that opens , he selects the type of question he wants.
4. Then press the play game button for starting game.

Scenario Name

*8) I don't know the answer to the question , I want to use my 50/50 joker to help.
(50/50 Joker)*

Participating Actors

Joe: User

Flow of Events

1. Joe has already started the game.
2. So after starting the game , on the game screen he click on the joker button on the bottom right corner.
3. He chooses the 50/50 joker.
4. After choosing the joker, 2 of the answer options are eliminated at random and Joe must choose one of these answers.

Scenario Name

*9) I don't know the answer to the question , I want to use my Give me the answer joker to help.
(Give me the answer Joker)*

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Participating Actors

Joe: User

Flow of Events

1. Joe has already started the game.
2. So after starting the game , on the game screen he click on the joker button on the bottom right corner.
3. He chooses the give me the answer joker.
4. After Joe use the joker, all the wrong answers in front of Joe are eliminated and the only correct answer remains, so that Joe sees the correct answer.

Scenario Name

10) I don't know the answer to the question , I want to use my Ask the audience joker to help.

(Ask the audience Joker)

Participating Actors

Joe: User

Flow of Events

1. Joe has already started the game.
2. So after starting the game , on the game screen he click on the joker button on the bottom right corner.
3. He chooses the ask the audience joker.
4. When Joe uses this joker, system asked to the crowd in the game and a graphic is created accordingly.
5. In this graph, the percentage of the crowd's answer to the question is shown.
6. Joe chooses his answer based on this graph.

Scenario Name

11) Im playing the game but I want to see how many points I got. (DisplayScore)

Participating Actors

Joe: User

Flow of Events

1. Joe has already started the game.
2. Joe can see his own earned points in the box in the upper left corner of the game screen.

Scenario Name

12) Something happened while I was playing the game and I need to pause the game. (StopGame)

Participating Actors

Carlos: User

Flow of Events

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1. Carlos has already started the game.
2. Press the double quotes button on the upper right corner of the game screen.
3. By to the pop-up window, he pauses the game for as long as he wants.

Scenario Name

*13) I got the question wrong in the game and I want to start over and get the highest score how can I start over ?
(RestartGame)*

Participating Actors

Carlos: User

Flow of Events

1. Carlos has already started the game.
2. Press the double quotes button on the upper right corner of the game screen.
3. He can restart the game from the beginning by pressing the restart game button on the pop-up window.
4. The restarting game consists of the same question type. If he wants to play the game with a different question type, he can quit the game and start it from the beginning.

Scenario Name

*14) I'm annoyed with the questions in the game so I want to quit the game how can I quit ?
(QuitGame)*

Participating Actors

Carlos: User

Flow of Events

1. Carlos has already started the game.
2. Press the double quotes button on the upper right corner of the game screen.
3. Then press the quit game button.
4. After quitting the game successfully he is redirected to the main menu.

Scenario Name

15) I have adjusted the sound when starting the game, but still the sound is too high, how can I edit it ?

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(*SetAudioIngame*)

Participating Actors

Carlos: User

Flow of Events

1. Carlos has already started the game.
2. Press the double quotes button on the upper right corner of the game screen.
3. Then press settings button.
4. On the screen that opens, you can adjust the sound settings as in the main menu.

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2.4.2 Use Cases

Use Case Name

1) *Login*

Participating Actors

Initiated by Visitor

Flow of Events

1. A visitor user downloads the game application.
2. Visitor opens the game application.
3. The visitor is first greeted with the login page.
4. Visitor clicks the choose nickname option.
5. Visitor enters an unique nickname before starting the game.
6. Visitor clicks the save button again.
7. How knowledgeable are you?'s successfully creates the user's account and directs the user to the menu.

Entry condition

Visitor clicks to the choose a nickname button of 'How knowledgeable are you?' greeting page.

Exit condition

Registered User logs into his/her account in 'How knowledgeable are you?' and goes to the game section from the menu.

Quality requirements

'How knowledgeable are you?' must successfully authenticate users via their unique nickname.

Use Case Name

2) *ChangeNickname*

Participating Actors

Initiated by User

Flow of Events

1. User goes to the main page.
2. User clicks the profile button.
3. User chooses the edit nickname button.
4. User enters a new unique nickname.
5. User presses to the save button.

Entry condition

User clicks the change nickname button of 'How knowledgeable are you?' to change their nicknames.

Exit condition

After entering the new nickname, if no one else has the nickname, the user can return to the main page by pressing the save button.

Quality requirements

'How knowledgeable are you?' users can change their nicknames at any time.

Use Case Name

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3) *DeleteAccount*

Participating Actors

Initiated by User

Flow of Events

1. User goes to the main page.
2. User clicks on the profile button.
3. User presses the delete my nickname option from the profile page.
4. User enters the old nickname correctly.
5. User press delete my nickname button.
6. How knowledgeable are you? deletes the user nickname.
7. User directed to the nickname selection page.

Entry condition

User clicks the delete my account button on the profile page and enters their old nicknames correctly.

Exit condition

Users old nickname is deleted and gets redirected to the nickname selection page.

Quality requirements

Users old nickname must be deleted successfully.

How knowledgeable are you? must respond to the user within 2 seconds.

Use Case Name

4) *AudioSettings*

Participating Actors

Initiated by User

Flow of Events

1. User goes to main page.
2. User clicks the settings button.
3. User clicks the Audio Setting button.
4. User adjust music and sound effects in Audio Settings

Entry condition

User clicks the settings button on the main page to change the audio settings.

Exit condition

Users return to the main menu page by pressing the back button.

Quality requirements

Users can play with music and sound effects as they wish.

Use Case Name

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5) Leaderboard

Participating Actors

Initiated by User

Flow of Events

1. User goes to the main menu.
2. User clicks the leaderboard button.

Entry condition

User clicks the leaderboard button which is on the main page.

Exit condition

Users clicks back button and gets redirected to their main page.

Quality requirements

The application presents a table where the user can see the score they made in the game, the scores made by others, how many are correct and how many are wrong.

How knowledgeable are you must respond to the user within 5 seconds.

Use Case Name

6) PickGenre

Participating Actors

Initiated by User

Flow of Events

1. User goes to mn page.
2. User clicks on the play game button.
3. User chooses 5 question types on the opening page.

Entry condition

User chooses the question types when the play game is clicked on the main page.

Exit condition

User exits from the back icon to main page.

Quality requirements

The user can choose the 5 types of question topics before the game starts.

Use Case Name

7) StartGame

Participating Actors

Initiated by User

Flow of Events

4. User goes to main menu.
5. User clicks on the startGame button.
6. User selects the type of question he/she wants to play and presses the play game button.

Entry condition

User clicks the startGame button on the main menu.

Exit condition

User finishes or quits the game.

Quality requirements

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Can start the game at anytime successfully.

System must respond to user in 3 seconds.

Use Case Name

8) StopGame

Participating Actors

Initiated by User

Flow of Events

1. User click the double quote button on right top corner during the game for stopGame.

Entry condition

User must started the game.

Exit condition

User clicks on the double quote button.

Quality requirements

He/she can pause the game at any time.

Since the return time of the button is very fast , it does not waste in the game.

Use Case Name

9) RestartGame

Participating Actors

Initiated by User

Flow of Events

1. User click the double quote button on right top corner during the game for stopGame.
2. Then user clicks the restartGame button for restarting game.
3. Accepts the system message for restarting game.

Entry condition

User must started the game.

Exit condition

User clicks on the restartGame button.

User must accept the warning message.

Quality requirements

He/she can restart the game at any time.

Use Case Name

10) QuitGame

Participating Actors

Initiated by User

Flow of Events

1. User click the double quote button on right top corner during the game for stopGame.
2. Then user clicks the QuitGame button for quitting game.
3. Accepts the system message for quitting game.
4. If user in main menu click the quitGame button for quitting game.

Entry condition

User must using mobile game.

Exit condition

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User clicks on the quitGame button.

User must accept the warning message.

Quality requirements

In less than a second , the score and information can be deleted and quit the game.

Use Case Name

11) DisplayScore

Participating Actors

Initiated by User

Flow of Events

1. User click the box on the upper left corner of the game screen.

Entry condition

User must started the game.

Exit condition

User clicks anywhere else but box.

Use Case Name

12) UseJoker

Participating Actors

Initiated by User

Flow of Events

1. User clicks the joker button on the bottom right corner.
2. User selects specific joker to use.
3. User answers the question using his joker.

Entry condition

User must started the game.

Exit condition

User selects specific joker.

Quality requirements

User presented with useful jokers that can help in the game.

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3. Glossary

Use Case: A specific situation in which a function could be used.

Entry Condition: The condition needed to activate a function.

Exit Condition: The condition needed to consider a function successfully done.

User: The person which used nickname to login the system.

Visitors: User not use their nickname to login the system.

System: How knowledgeable are you ? Application

4. References

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