

Subtraction Game - Software Requirements Specification

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1. Introduction

1.1 Purpose

This document provides the software requirements specifications for the Subtraction Game mobile application for kids to help improve math skills.

1.2 Scope

The scope of this project is to develop a mobile game application for kids to practice subtraction. The game will display subtraction questions with multiple choice answers. Based on whether the user selects the right or wrong answer, feedback will be provided along with the correct answer. The game will also include features like pause menu, question counter, scoring, etc.

1.3 Definitions and Acronyms

- SRS - Software Requirements Specification
- UI - User Interface

2. Overall Description

2.1 Product Perspective

The Subtraction Game will be a stand-alone mobile application built for Android and iOS platforms. It will not integrate with any external systems.

2.2 Product Functions

- Display subtraction questions with multiple choice answers
- Allow users to select answer choices
- Provide feedback if answer is correct or wrong
- Display correct answer if user selects wrong answer
- Maintain score based on correct answers
- Display question counter
- Provide pause menu with audio cue

2.3 User Classes and Characteristics

The primary user of this application will be kids to help improve math skills. The reading level and math level of users can vary. The application should be designed to be usable by kids aged 5-10 years old.

2.4 Operating Environment

The application will be developed for the latest versions of Android and iOS mobile operating systems. It should function properly on mobile devices like smartphones and tablets.

3. System Features and Requirements

3.1 Game Slide - Subtraction

3.1.1 Pause Button

- When clicked, an audio cue will play and the pause menu will be displayed over the game screen.

3.1.2 Question Counter

- Display current question number and total questions (e.g. 2/15)
- Should update after every question attempt

3.1.3 Answer Buttons

- Displays 3 answer options for each question
- One button will have the correct answer

3.1.4 Answer Feedback

- If correct answer clicked, display smiling emoji and go to next question
- If wrong answer clicked, display sad emoji and go to next question

3.2 Game Slide - Correct

3.2.1 Pause Button

- Same as in 3.1.1

3.2.2 Question Counter

- Same as in 3.1.2

3.2.3 Correct Answer Feedback

- Display smiling emoji
- Increase score by 1 • Show correct answer button

3.3 Game Slide - Incorrect

3.3.1 Pause Button

- Same as in 3.1.1

3.3.2 Question Counter

- Same as in 3.1.2

3.3.3 Incorrect Answer Feedback

- Display sad emoji
- Score stays at previous level
- Show correct answer button

4. Other Requirements

4.1 Performance Requirements

- Application should have a response time of 2 seconds or less for any user action
- Application should work smoothly without any lags on mobile devices

4.2 Safety Requirements

- The application should not contain any content not suitable for kids

4.3 Security Requirements

- No confidential user data will be stored or transmitted by the application

4.4 Software Quality Attributes

- Application should have an intuitive and easy to use interface suitable for kids
- The code should be well documented and structured to enable future maintenance
- Proper exception handling and input validation should be implemented for robustness

4.5 Business Rules

- The application will be free to download and use with no ads or in-app purchases