# Software Requirement Specification

Game Dev - Block Basher

**Team Name - Nebula Nexus**

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# 1. Introduction

## 1.1 Purpose

The purpose of this software requirements specification is to define the requirements for the development of a highly intelligent and adaptable block basher game app in Java. The app aims to provide personalization and user-friendliness as its key features.

## 1.2 Scope

The scope of this project includes the development of a block basher game app that allows users to play the game, track their scores, and customize their gameplay experience. The app will be built using Java and will prioritize personalization and user-friendliness.

# 2. Functional Requirements

## 2.1 Game Mechanics

- The game should follow the classic brick breaker mechanics, where the player controls a paddle to bounce a ball and break bricks.

- The paddle movement should be controlled using intuitive controls, such as touch gestures or keyboard inputs.
- The ball should bounce off the paddle and walls accurately, following the laws of physics.
- Bricks should be arranged in different patterns and colors, with varying levels of durability.
- When a brick is hit by the ball, it should break, and the player should earn points based on the number of bricks broken.

### 2.3 Scoring

- The app should keep track of the player's score and display it during gameplay.

### 2.4 Customization Options

- The app should provide customization options to allow users to personalize their gameplay experience.
- Users should be able to choose different paddle designs, ball colors, and background themes.

### 2.5 Adaptive Difficulty

- The app should adapt the game difficulty based on the user's performance.
- As the player progresses and achieves higher scores, the game should increase the speed of the ball or introduce more challenging brick patterns.

## 3. Non-Functional Requirements

### 3.1 Performance

- The app should be responsive and provide smooth gameplay without any noticeable lag or delays.
- The game physics calculations should be accurate and efficient.

### 3.2 User Interface

- The user interface should be intuitive, visually appealing, and easy to navigate.
- The app should provide clear instructions and feedback to the user during gameplay.

### 3.5 Reliability and Stability

- The game shall be stable and reliable, with minimal crashes or unexpected interruptions during gameplay.
- It should handle errors gracefully, providing clear error messages to users in case of any issues.

### 3.4 Network Connectivity

- The game shall not require a continuous internet connection to play. Once downloaded, it should function offline without any loss of features or gameplay experience.

## 4. Stakeholders

- **Players:** The primary stakeholders, players, are crucial for the game's success. Their experience, feedback, and satisfaction are paramount. Understanding their preferences and gameplay expectations is vital for enhancing the gaming experience.
- **Game Developers**: The development team, including programmers, designers, and testers, are significant stakeholders responsible for creating the game according to defined requirements. Their expertise and creativity are pivotal for successful implementation of game features and mechanics.
- **Project Managers**: Project managers oversee the project, managing resources, schedules, and budgets. They ensure that the development process adheres to timelines and budget, balancing the needs of players and developers.