Software requirement specification

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1 Introduction

1.1 Purpose of writing

With the popularity of mobile devices and the development of network technology, the market demand for racing games on mobile terminals has gradually increased. In order to meet the needs of the majority of players, we have designed a competitive racing game small program.

The main purpose of this document is to clarify the needs of users and confirm them in the form of documents. This helps developers better understand the needs of users and develop software that users are satisfied with. This document is the result of communication between user representatives and developers. The intended readers of the software requirements specification are the customer and user business executives, the user's middle management and specific personnel, the user's IT executives and developers, including designers, coders, peer experts, project managers, including project ma

nagers, quality assurance personnel, testers, requirements managers, configuration administrators, and planners.

2 User scenario

2.1 Goal

At the same time, it can also be used as an advertising carrier to provide promotion opportunities for businesses.

In terms of scope, this small program can be applied to various occasions, such as leisure and entertainment, social interaction and so on. The relationship with other related software is that it is also an entertainment small program, but compared with other racing games, its characteristics are lightweight, easy to use, and have social attributes, players can invite friends to race together, increase interaction.

In terms of development background, with the development of mobile Internet, small programs have gradually become a popular application form. As a classic game genre, racing games have a wide audience base. Therefore, the development of this racing game small program can adapt to market demand and seize market share.

At the same time, this game can also contribute to the development of China's small program ecology, promoting scientific and technological progress and industrial innovation.

In summary, the development intention of this racing game small program is to meet the user's entertainment needs, the application goal is to attract and retain users, including leisure entertainment and social interaction. The relationship with other related software is to provide a different entertainment experience with a social nature. In terms of development background, it follows the development trend of mobile Internet and small programs, and is expected to become a popular game application.

2.2 User characteristics

1. Young people: Racing games are often highly exciting and competitive, and young people are more likely to try them.
2. Male users dominate: Men are more interested in competitive and speed games than women.
3. Like challenges and competition: small programs in racing games usually have leaderboards, achievement systems and other elements to attract users who like challenges and competition.
4. Short-term game enthusiasts: Since the small program of racing

games is usually simple and fast-paced, it is easy to attract short-term game enthusiasts to play fast games.

5. Social interaction: The small program of the racing game can support multiplayer battles, and users can make new friends and interact with each other in the game, increasing the social attributes of the game.

6. Fragmented time use: The small program of the racing game is suitable for waiting for a car, resting and other fragmented time to meet the needs of users to kill time.

7. Willingness to pay: Some users may be willing to pay for in-game virtual items, removing ads, etc., to enhance the game experience.

8. Affected by game evaluation: Users will be affected by evaluation factors such as ratings and reviews when choosing a small program for racing games.

9. Focus on updates and optimizations: Users expect constant updates to add new content and improve the game experience.

2.3 Scene requirement

1. Players can choose from different cars and tracks.

2. Players can adjust the car's Settings, such as speed, acceleration, braking, etc.

3. The player can play against other players, or against the computer.

4. Players can view tournament results and leaderboards.

5. Players can purchase new cars and tracks.

6. Players can save their progress and continue playing.

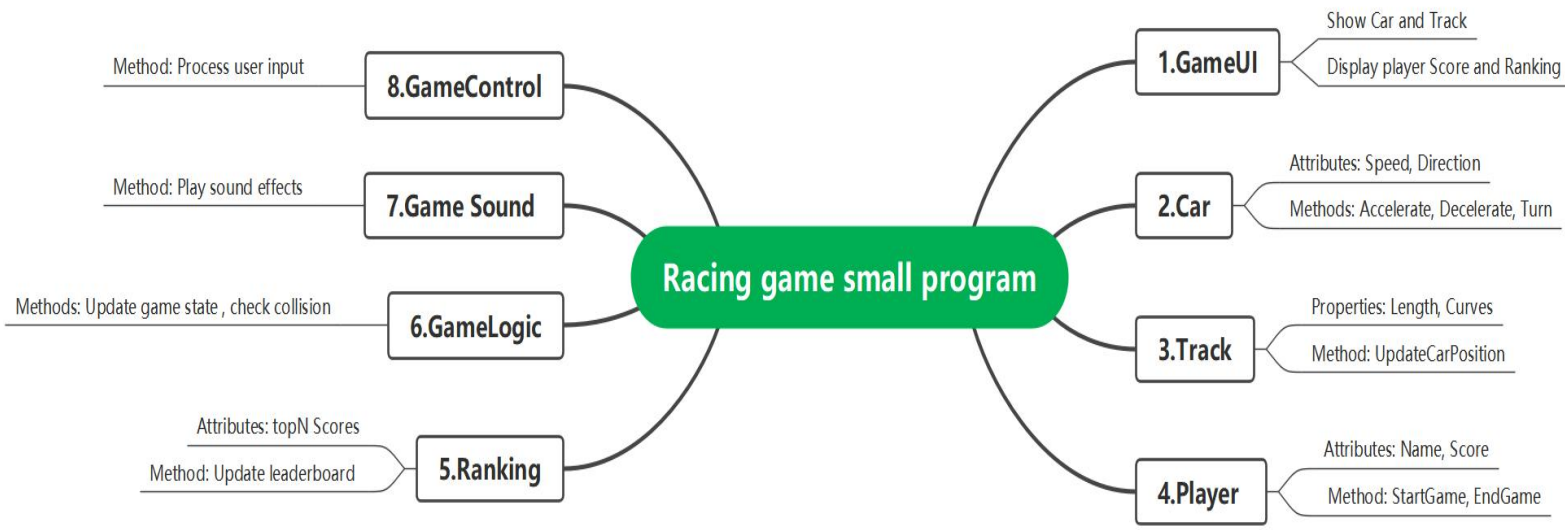
7. Players can share game scores and screenshots to social media.

8. Players can watch live games and replays.

9. Players can participate in various competitions and challenges, such as time challenges, drift challenges, etc.

10. Players can unlock new cars and tracks, or get new in-game items and rewards.

3 Class diagrams



4 Interface prototype

Main menu interface:

Start the game button: click to enter the game mode selection.

Multiplayer button: Click to enter the multiplayer option.

Set button: click to enter the game Settings.

Exit button: Click on to exit the game.

Single-player game Settings interface:

Select a vehicle: The list displays the available vehicles, allowing the player to select.

Select Track: The list displays the available tracks, allowing the player to select.

Start the game button: Click on it to start the single-player game.

Return button: Return to the game mode selection.

5 Functional descriptions

* * Game mode * * *:

-Single-player mode: Players can compete with the AI.

* * Vehicle Options * * *:

-Different types of racing cars (sedans, supercars, suVs, etc.).

-Customize the vehicle appearance and performance.

-The ability to upgrade and modify the vehicle.

* * Gameplay * *:

-Control mode (keyboard, gamepad, tilt cell phone, etc.).

-Real-time physics engine to simulate real race car handling.

-Accelerating, braking, drift, etc.

* * Competition elements * *:

-Reward and leaderboard system.

* * Sound effects and music * * *:

-In-game sound effects, including engine sound, brake sound, etc.

* * Graphs and Interface * *:

-High-quality game graphics and visuals.

6 Acceptance verification standards

* * Game performance * * *:

-The game should be able to run with smooth frame rates on the t arget platform, ensuring no significant lag or delay.

* * Vehicle handling * * *:

-The race car should be able to respond to player input, including acceleration, braking, steering, and drift operations.

* * Physical engine * * *:

-The game should use a physical engine to simulate the movement of a racing car, ensuring actual physical effects such as inertia, frict ion and gravity.

* * Track design * * *:

-The track should have diversity, including different types of terrain and environments to ensure diversity of player experience.

* * Vehicle selection and customization * *:

-Players should be able to select different types of race cars to customize the appearance and performance.

* * Sound effects and music * * *:

-In-game sound effects and music should match the game scene to provide an immersive gaming experience.

* * Rewards and leaderboards * *:

-The game should track and show player achievements, rankings, and rewards.

* * Network function * * *:

-Online battles for multiplayer games should have no delay or connection issues.

. * * Archive and progress * *:

-The game should be able to automatically save progress and archive to ensure that the player does not lose game data.