Roblox Game Development: The Game Development Process in a Scarce Genre

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Abstract

Roblox, a gaming platform where users develop games for other users to enjoy, not only lacks games in its Racing genre but many Anime-inspired games are repetitive and lack variety. To address the problem, I worked with a partner to develop a game inspired by Mario Kart using Roblox's Studio. Roblox Studio provides developers built-in 3D modeling, sound, UI, animation editing, and plugin systems along with the programming language Lua to develop games. I used Trello, a project management web application, with an agile development process to document ideas and progress on various aspects of the game. The project was successful in the creation of a game that mixes the Racing and Anime genres for users to enjoy. However, the project still lacks a consistent player count due to limited advertising and poor visuals, meaning the game is not likely to be long-lasting. The next step is to create and implement better visuals and UI along with advertising for more public traffic, while also fixing bugs/glitches as they appear.

1. Introduction

Imagine yourself watching Netflix and all of the shows that are available in a certain genre have the same plot and lack creativity. You then try to look at a different genre and that genre is more promising, but there are very limited options that you have already played. That is what my team believed was the state of the racing and anime genres on the Roblox gaming platform, a platform enabling users to develop their own games and play games that other users created.

Roblox supports many different genres that users can play and develop games for. The anime genre is similar to the first scenario where there were many games but of limited variety. The genre involved users fighting with abilities from the anime the game was based on against players and non-playable characters (NPCs). Users would fight, gain experience, level up, and buy new characters with the money they earned and that is all the game entailed. Many players became bored with the repetitiveness of these games. Although users were playing it, users joined and then left after becoming bored or noticing the game was the same as a game in the same genre they had just played.

The racing genre is similar to the second scenario in that it had a few games and those games involved free roam with very limited systems included. Users would be able to buy cars, roam around and travel the city, and queue into races that involved a short track to race on against others, with no other special effects or user interface. Basically, this is the same as free roam, but the area is limited to the race track. Users playing these games felt like it was a sandbox game to do whatever you wanted, instead of a fast-paced racing game that one might anticipate.

My partner and I noticed these issues in these genres when deciding to make a game together. We decided to address these problems by developing a game that combined the two genres. The idea we came up with was a game similar to Mario Kart, except users would be running instead of driving vehicles on different maps with boosts and power ups inspired by various anime.

2. Related Works

Roblox (2022) recognizes that anime games are starting to gain popularity. This blog identifies the top five genres, racing not being among the five. This reinforces our team's belief that the anime genre has grown to popularity and the racing genre remains to be a less popular genre, thus creating a game combining the two.

A wiki page created and supported by the Roblox community (2022), lists the top 100 games visited by users. There are a few racing games that are free-roam styled and a few anime games that focus on player-NPC interaction. This is further evidence that users tend to play other genres with the very limited options in the anime and racing genres and more variety is needed.

3. Process Design

In this section, the process of designing the game and the development of each major

component is explained. These components include the lobby, GUIs, racing system, maps, power ups, and more.

3.1. The Process

The project was conducted with an agile development style with weekly meetings on Sunday. This allows for sprints with development throughout the week and then reflection and new goals for the week to be handled during the meeting and reevaluation of the development progress. Almost all development was done through Roblox studio. Designs for icons and GUI was handled through Microsoft Paint 3D and photoshop. There is a separate studio for power-up development and a separate one for the game itself that testers had access to. Testers were chosen from a group of friends that the developers felt comfortable with playing, and this eventually expanded to include filling out a form to become a tester to allow others through a form of background checking to play the game.

3.2. Lobby and GUI

Once we figured out our development cycle, we began to work on a lobby and GUIs for the game. The lobby is an area where users would wait for the round to start and while waiting, they could interact with other users exploring different areas. The GUIs that needed to be created were an AFK button, music enabling/disabling, shop, and spectate. The AFK button allows users to take a break from the game while not interfering with other users racing. The music button allows the user to enable and disable the music. The shop button makes another GUI appear that contains power-ups that users could buy and equip. The spectate button allowed users to spectate others that are racing to see the race while they wait in the lobby.

3.3. Race System

Once the lobby and the GUIs were complete, the race system was created. The racing system involves users voting for a map, the game changing the user's team from being on the lobby to being a racer, loading the map chosen, teleporting the user to the race map, and determining the winner and giving out rewards depending on the placement of the user compared to other users. The voting system was added to the lobby, inside a building, and the game randomly chooses three maps for users to vote on. Users touch a pad to add their vote to a corresponding map and after the intermission period, the winning map is loaded and players are teleported. Users then race around obstacles and barriers competing to touch the finish line first. Rewards are given out depending on the number of racers and placement. The reward is a certain amount of in-game currency to buy power-ups through the shop.

3.4. Maps and Power Ups

Next came the development of the maps and power ups. There was no order in which we made a map or a power-up, it was up to the discretion of the developer. Many maps needed to be created to have enough variety, but there were even more animes to go through and decide which maps to recreate into a map to race on. Maps were chosen based on whether they were easy to replicate, had enough content to create a race that took a few minutes, and whether it was possible to create them quickly. For each map, barriers stop users from swaying off the race track, boosts propelled users forward, traps slowed users down, and power-ups awaited user pick-up.

Power-ups to be created were chosen through methods similar to maps, such as having enough knowledge about it and whether users would be interested in using that power-up. The three main categories were throwables, traps, and transportation, each self-explanatory. In a race, power-ups in the shape of a sphere are picked up by users. When picked up, the game randomly chooses between the three power ups the user equipped from the shop and provides it for the user to use. Power-ups are used by left-clicking on the mouse, and different power-ups do different things. As power-ups were made, icons were created for them and added to the shop in their respective category.

3.5. Extra Additions

During the creation of other aspects of the game, we felt that there needed to be other aspects to interest users and keep them in the game. We decided to add multiple things to the

lobby. One of these was coins to allow users a method for gaining in-game currency outside of races. These coins have values of 10, 25, and 50 and the user simply had to touch the coin to get it. A leaderboard was also added to support a sense of competitiveness between users to keep them in the game to beat their friends' records. The leaderboards show the top 25 users in a specific category. The categories are the number of times a player has placed first, second, and third; and this is also further separated into a global category that includes everyone, and a server category that includes only people in your server. Another addition was gambling with in-game currency allowing users to earn more through various games, such as slot machines, coin flips, and more. Depending on the game, the player could either lose money, win the same amount back, or win 1.5x to 2x more. These additions aided in keeping users in the game.

3.6. Challenges

One of the challenges we have is balancing development with university lives. During the summer, there is an abundance of time to spend on development, but during university, time is taken up by events, homework, and more. As a result, meetings often get cancelled and less development is done.

Another challenge is marketing. This was made evident to us during a beta test explained in the Results section below. Marketing and advertising a game are difficult as there are not many places to do so and it takes a lot of effort to get users interested. We started with just posting on Twitter and Discord, two social media platforms, which did not work out too well. We have now moved on to creating videos and reaching out to other games and their developers to create partnerships to increase the community.

4. Results

The project is still not complete, but there has been regular testing. In August 2022, an open beta test session was held for a period of 2 days to allow the Roblox community to experience the game, provide feedback and report any bugs or issues they may have experienced.

Through the session, we found out the game is designed well, but needs more polishing to make it look more appealing. Users enjoyed the game with their friends and gave suggestions for additions. Users found minor bugs and issues with the game such as teleporting of characters not always working, and these issues were quickly fixed. One major issue was the gambling aspect of the game. A user informed us that this was a violation of Roblox's terms of use involving the gambling topic and the feature was quickly removed for a rework.

Although the game systems and design were successful in keeping players in the game, there was an issue of attracting users to play the game in the first place. The limited marketing through social media sources such as Twitter and Discord was not enough and more marketing is needed along with new techniques and media outputs. With the incomplete project, we expected marketing to be an issue. We wanted users to come and join the game to find out more about it rather than present everything upfront when advertising so that wanting to know more pushed users to join the game. However, this backfired since fewer people decided to join due to the lack of knowledge about the game.

The project has returned to a state of closed community testing for further development and redesigns to the current systems. We have found that users enjoy the game and there is support and interest for it, but there are still more features to add, along with conducting extensive marketing.

5. Conclusion

This project, although it is still in the development stages, has the potential to shine light on the anime and racing genres and their respective communities on Roblox. Other developers are able to see how these genres can expand from what they currently are. The communities these genres have will push for developers towards new ideas and concepts for new games. Developers in the anime genre will realize that more expansion available in the genre and they are not limited to fighting games. Developers in the racing genre can be inspired to develop more than a sandbox racing game with rounds, rankings, and more.

Additionally, developers may start looking into other unique genre combinations that have not been attempted before and be inspired to try different combinations out. Overall, genres that are bland with one type of games and limited systems will be expanded on and gain larger communities.

6. Future Work

The next steps for this project are to recreate the gambling aspect that does not violate Roblox's terms of use, redesign GUIs and maps to make the game look newer, and continue marketing. In order to fix the gambling aspect, the user needs to be rewarded at all times or the currency used for betting may not be purchasable with real currency like USD. The maps and GUIs need to be designed to look more modern with the newer tools that Roblox has provided such as realistic terrain. In terms of marketing, more aspects of the game need to be revealed alongside more posts and exposure. With these steps, the game can become more successful than initially seen through the beta test and achieve the goals set for the project.

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