SS23 Proximity

Firebreath Forest

Final Release

Johannes Madest

Mingyang Li

Bassant Elnaggar

Summary of our Game

The current state of the game based on the initial plan and goals:

- **Functional minimum:**
  - **Player can switch between the main scene and the mini-games**
  - **Two functional mini-games each depicting one of the associated emotions (Anticipation & Excitement/Speed)**
- **Low Target:**
  - **Building the roller coaster level**
  - **Having a local high score consisting of the sum of individual mini-game scores**
- **Desired Target:**
  - **The mini-games connected with the main roller-coaster level**
  - **Player is affected with the exact emotion of the corresponding mini-game**
- **High Target:**
  - **4 functional mini-games connected with the main game**
  - **Having a global high score leaderboard**
- **Extras:**
  - **Polished games**
  - **Soundtracks**
  - **Tutorial scene**

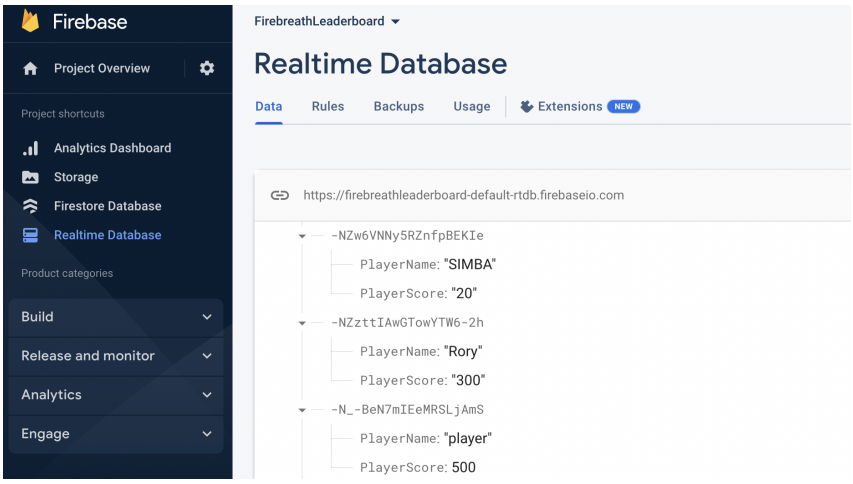
Changes since Playtesting Build

Regarding both minigames, several changes have been made.

In the Dragon Sprint Minigame, a visual indicator has been added, showing the players distance relative to the goal and the dragon. Additionally, the difficulty has been adjusted to make it more challenging to maintain higher levels of speed.

In the Dragon Hunt Minigame, light sources and cover objects have been added to improve visibility and offer more opportunities to hide. In response to playtesting feedback, the dragon's behavior has been adjusted to avoid confusing failures. As such, the trees of the surrounding forest now provide visual cover.

The last major addition to our game is a global leaderboard. After a player is satisfied with their highscore, they are now able to end their attempt and enter their name, after which the player's name and score are saved in a Firebase Realtime Database. Then, the global scoreboard is displayed which include the ten currently highest scores.



Course Commentary

1. What was the biggest technical difficulty during the project?

- Cart traveling with physical simulation: We have attempted various approaches, including NavMesh and the Spline package from Unity, to enable the cart's movement on the track. However, none of these methods can be easily expanded to simulate physical effects such as gravity shifts and acceleration during a vertical loop. Moreover, the available attributes are limited, and directly modifying them may lead to issues.

- Track placement: We have invested a significant amount of time, but so far, we have been unable to find a suitable method to generate a mesh dynamically based on the track route. Given the considerable length of our track path, manually placing track prefabs piece by piece is not

feasible. Although the Spline package we are currently using offers a basic function for positioning track pieces along the path, it leads to issues with smoothness. Additionally, the sheer number of models being placed increases the rendering workload and reduces the game's frame rate. The ideal solution would be to generate a mesh dynamically according to the track route. However, due to the immense amount of work involved, it is not feasible to achieve this within a short timeframe.

2. What was your impression of working with the theme?

- While the concept of rollercoasters was interesting to play around with, we initially struggled to find an engaging game concept that has not been realized before.

3. Do you think the theme enhanced your game, or would you have been happier with total freedom?

- Especially during brainstorming possible game ideas, we considered having a set theme to be very helpful, as it allowed us to narrow down what game concepts and art styles we wished to pursue from the beginning. In our opinion, without a theme, coming to a consensus of what game we wanted to develop would have taken significantly longer.

4. What would you do differently in your next game project?

- During this project, we eventually realized that our goals have not been set optimally. In future projects, it would be better to set smaller tasks in the earlier targets as well as set a more detailed list of features we wish to implement to reach a certain target.

5. What was your greatest success during the project?

- Players and Playtesters felt emotions very close to the emotions we designed the minigames around, all of them emotions experienced in a rollercoaster ride. As the process of playtesting and receiving feedback was late in the project’s timeline, we were pleased to see these results, as we could not properly gauge whether the core design of our minigames would have their intended effect in the earlier stages of development.

6. Are you happy with the final result of your project?

- As the desired target, functional minimum and extras are reached, we are satisfied with the results of the game. Nevertheless, we would have liked to add more mini-games to our game play.

7. Do you consider the project a success?

- With the concept of emotions as the core part of our game concept, we consider this project as we both reached our desired target and designed minigames that were able to invoke certain emotions of a rollercoaster ride within our playtesters.

8. To what extent did you meet your project plan and milestones (not at all, partly, mostly, always)?

- In the early stages, we were behind on our milestones, as we set our first targets a little too high. Eventually, we were mostly able to follow the plan we set at the beginning and reached our milestones in time.

9. What improvements would you suggest for the course organization?

- In general, we enjoyed how the course was organized. The different milestones gave us clear goals and deadlines to work towards them. While this could be too much too ask, having assistance in finding playtesters in any shape or form could have been useful to gather a larger amount of feedback.

Conclusion

In conclusion, our game project successfully incorporates the concept of emotions into gameplay through a combination of main scenes and mini-games. Players are able to switch between the main roller-coaster level and two functional mini-games, each representing a specific emotion: Anticipation and Excitement/Speed. The low target of building the roller coaster level and achieving a local high score, which is the sum of individual mini-game scores, has been met. We aimed to go beyond the low target and achieve the desired target, which involved connecting the mini-games with the main roller-coaster level and ensuring that players are affected by the exact emotion of the corresponding mini-game. Based on the play testing phase and results, we are

pleased to report that we have successfully implemented this feature. Furthermore, we strived to reach the high target of having four functional mini-games connected with the main game, along with a global high score leaderboard. Although we were not able to fully realize this high target, we have made significant progress in that direction by implementing leaderboard functionality and making necessary adjustments to the difficulty levels of both mini-games. Overall, we are satisfied with the final result of our project. We have achieved the desired target, fulfilled the functional minimum requirements, and added extra features such as polished games, soundtracks, and a tutorial scene. While we would have liked to include more mini-games in our gameplay, the game has successfully met its intended purpose of invoking specific emotions and creating an engaging experience for the players.