30/05/2023

My Role

My role in Group 1's project, *Rebound Rush*, was Lead Designer, Level Designer, & Programming team member. As Lead Designer, I was responsible for the game's direction visually and in terms of gameplay. During the first weeks of the project, I created moodboards and sketches for level themes (see figure 1). These were used by the 3D & 2D asset teams as reference for models, textures, cutscenes, and more. They helped guide (and in some cases misdirect) the visual identity of the project.

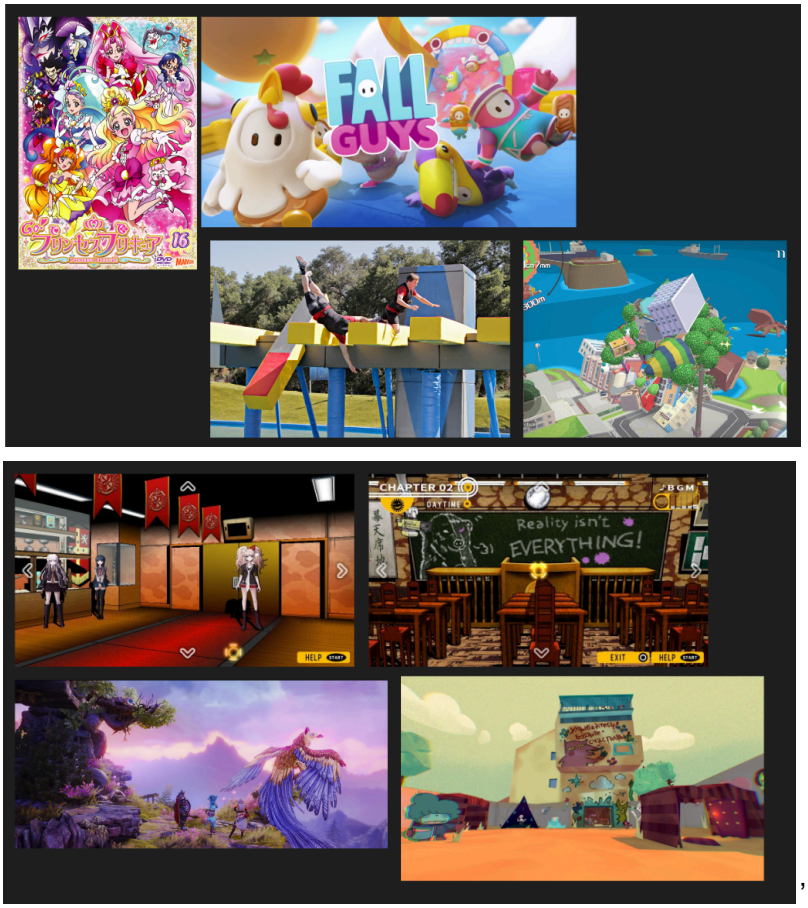
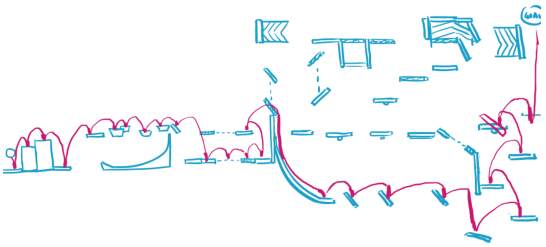
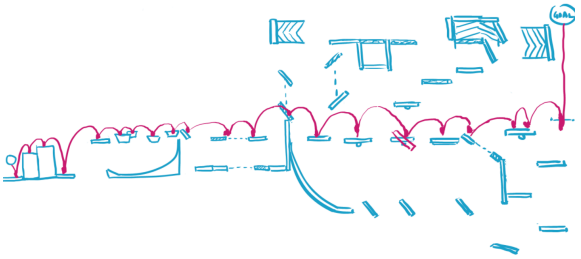


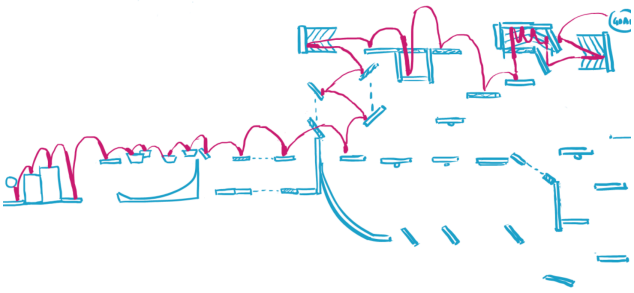
Fig 1. Moodboard for *Rebound Rush*'s aesthetics.

These pictures in the first screenshot represent both the vibrant and colourful aesthetic *Rebound Rush* aimed for as well as the obstacle-course game inspiration. The image of *Fall Guys* in particular was perhaps a misstep, as it caused confusion in both our initial pitch presentation and amongst the group towards the beginning of the project. It was meant to indicate the obstacle-course style levels the game would use, but also implied live-service game design with shops, cosmetics, and more. The second screenshot was meant to showcase games with a mixture of 2D & 3D assets or perspectives. This is because it was established early on that our group was better geared towards visuals over technical fidelity — using a mixture of 2D & 3D allowed all group members to play to their strengths.

One of my earliest duties as the project's Level Designer was to sketch obstacle ideas and come up with level theme moodboards (see figure 2 & 3).







a mixture of horizontal & vertical levels - or mostly horizontal with maybe 1 vertical

3 levels to start

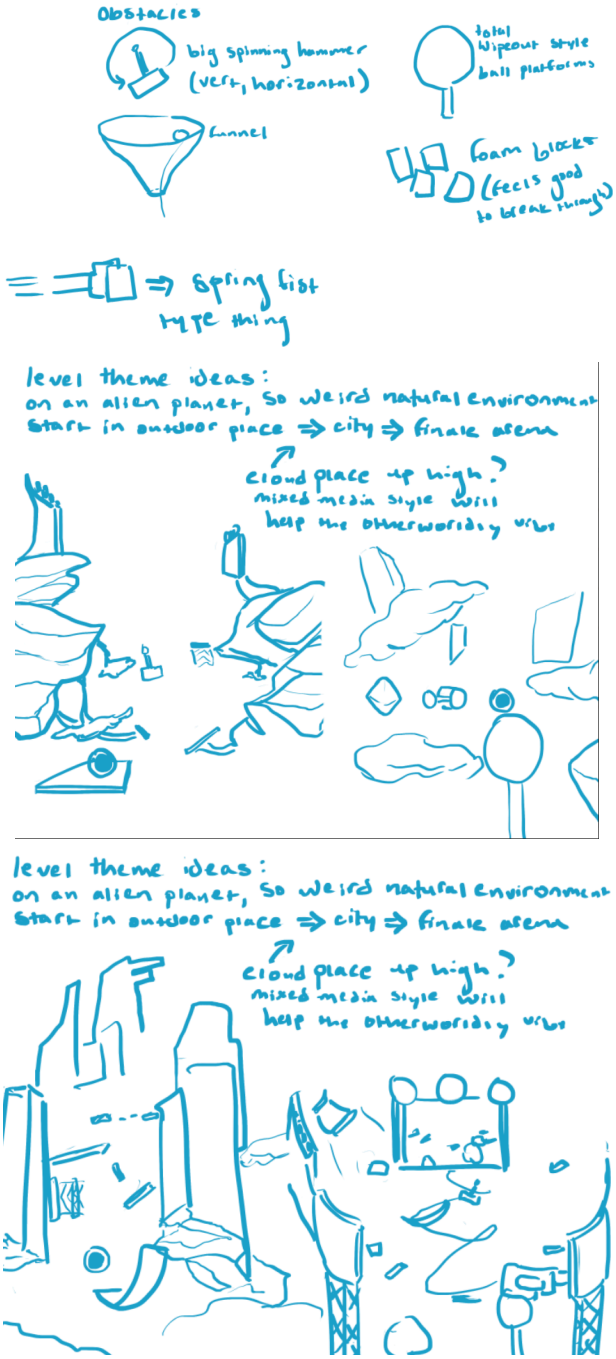


Fig 2. Initial level design sketches.

While these level designs weren't used exactly in the final game, many elements from these initial sketches were included, such as the platform types and the broad level themes. These level themes were contextualised with the moodboards below.

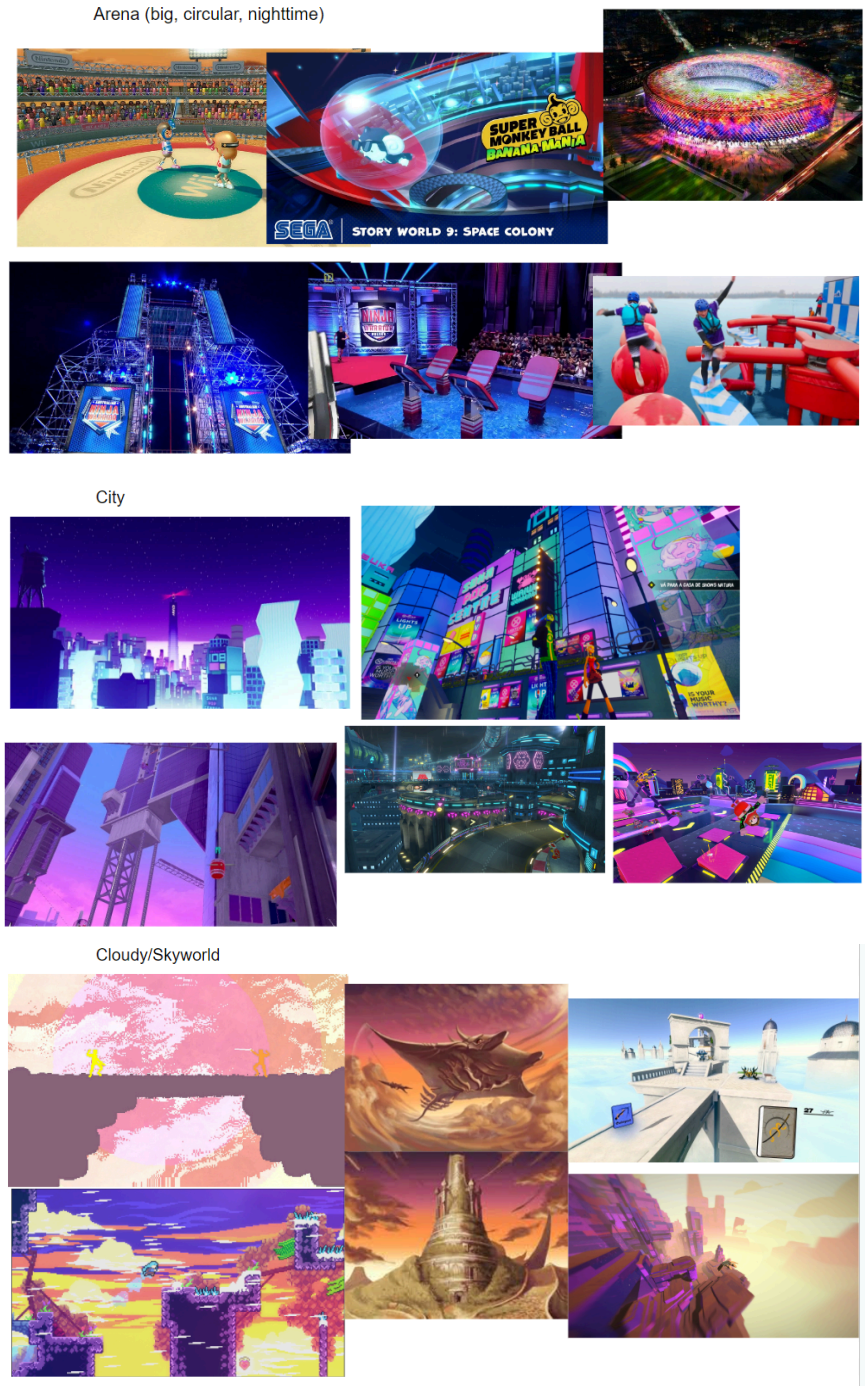


Fig 3. Level Themes Moodboard.

These sketches sometimes caused confusion, however — at times they were clearer in my head than they were to others and sometimes taken more literally than I intended. This was a weakness in communication on my part, and down the line group members had to ask for clarification.

After the first two weeks or so my focus shifted from concept work to technical implementation as a member of the Programming team. *Rebound Rush*'s concept centred around a simple core gameplay mechanic, the 'rebound'. By holding the left mouse button or spacebar, the player would be able to add a downward force to the player character in order to rebound off of surfaces and gain height and velocity. This was meant to be a unique spin

on the 3D platformer genre — specifically momentum-based 3D platformers like those in the Sonic the Hedgehog franchise. ‘Rebound’ was a simple way to balance speed and precision, but it needed to feel responsive as it would be the function of the game the player would interact with the most. For this reason, the majority of early development time was spent tweaking a rigidbody-based gameplay controller. I wrote and tested the gameplay controller in a test scene in Unity (see figure 4). On top of the basic movement needing to feel good, the movement also needed to respond to a variety of platform and obstacle types, such as gravity platforms. These were also coded early on and tested in the same scene.

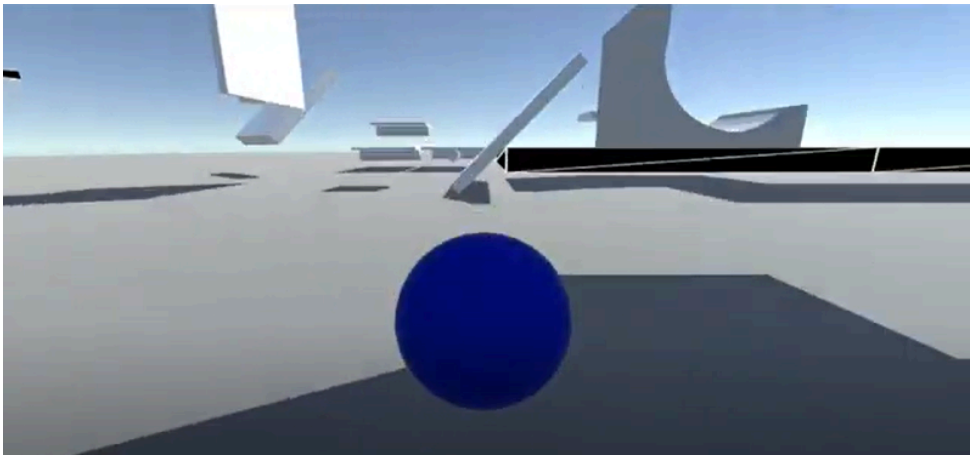


Fig 4. Gameplay controller in Unity test scene with different obstacle types.

The early tests were done without any art assets so I could focus on the game feel first. This was my largest role as a programmer on the game but I later contributed to the UI, character selection, & scene transition code as well. While not technically under the Programming team’s role, I was also largely responsible for implementing the assets the 3D, 2D, and Technical Lead created into the game, including models, animations, textures, shaders & particle effects. These were integrated with the player controller to respond to the player’s input — for example, a ‘shine’ particle effect appears when the player starts their ‘rebound’ at the peak of their trajectory. However, most of these assets were not ready until the last two weeks of the project, so during the time in between I worked on the level designs.

The level designs for *Rebound Rush* aimed to emphasise the speed the player can gain by mastering the ‘rebound’ mechanic. The levels progress from an oppressive, dark arena, to cramped and busy floating city streets early in the morning, to an expansive sky at dawn. The first level is relatively simple to give the player an opportunity to get accustomed to the controls. The levels gradually introduce more platform and obstacle types, like the gravity platforms in the city level and the fans in the sky level. In addition, the levels all feature multiple routes of varying difficulty which allows for replayability. All of this was kept in mind as I greyboxed the levels in Unity (see figure 5).

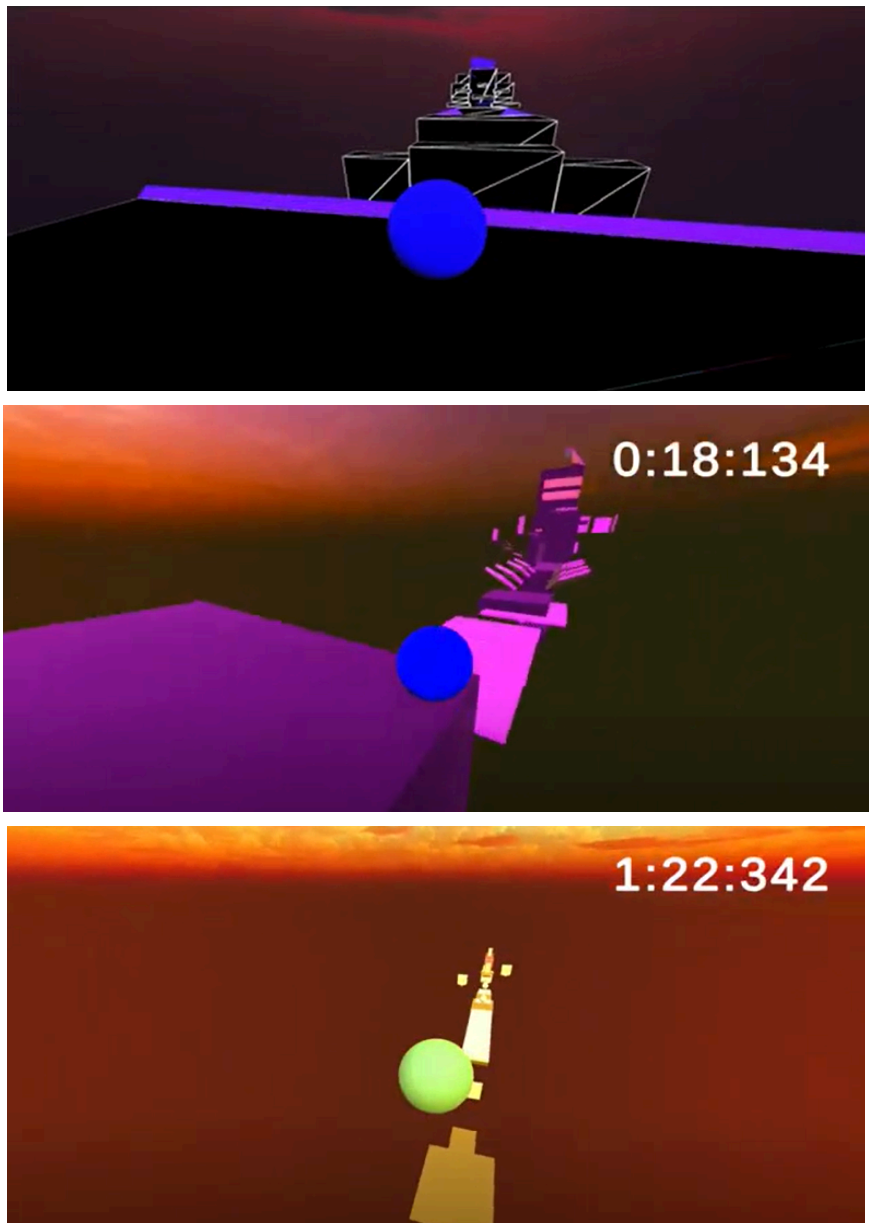


Fig 5. Testing level greyboxes before art was added.

Overall, my role in the development of *Rebound Rush* was more technical than I expected it to be, but it was gratifying to see it all come together from concept to completion. Outside of this, I also wrote the majority of the agendas for our groups twice-weekly in-person meetings. I helped organise the team's Github source control.

Group Work

The group used a scrum methodology to organise our work. In practice this looked like the aforementioned twice-weekly in-person meetings (one with our module supervisor on Tuesdays and one for the group on Fridays). On Fridays we would assign the tasks for the following week and discuss progress on current assignments. In addition to these, we also had daily online check-ins at 2:30, either by text or in a Discord voice channel. These check-ins were not held on weekends to protect groupmember's work-life balance. The daily check-ins were quite helpful as group members were updated frequently on each other's

progress and had a dedicated time to discuss any issues that arose. Using this scrum approach also had the benefit of flexibility — if any group members couldn't make it in time they could send text updates at a time that worked best for them. The group also set up a well-defined code of conduct at the beginning of the project that luckily rarely if ever had to be referred to — in terms of collaboration, respect, & kindness, our group was very successful.

Because we discussed each other's strengths and weaknesses in some of our first meetings, we were able to allocate work and roles accordingly. This, for better or worse, meant there wasn't a lot of overlap in work between teams. For example, the 3D assets team stuck to modelling while 2D worked on UI elements and I worked on the level designs. Because people stuck to their expertise, I think communication was less effective than it could have been. At times during check-ins, group members (myself included) would say what they were working on but wouldn't send screenshots or videos. These would have gone a long way towards keeping group members on the same page. As a result, there was confusion on the direction of the game as people interpreted the moodboards and concept documents in different ways. As the Lead Designer I feel in part responsible for this — I think had I been clearer in defining a direction and communicating it to group members, the project may have been more cohesive. At the very least, I think I could have suggested discussing the design direction further. I believe that everyone on the team put forth their best effort, and that it came together well in the end. However, more time dedicated to discussion in the concept stage and more detailed updates from group members might have made for a more cohesive project.

Our group didn't have any conflicts that stand out, but I think some group members were more vocal than others (I would include myself in that category). Though we asked the quieter members for their input during meetings, they may have felt pressured to agree if they didn't feel comfortable speaking up in the first place. I'm not sure what would be the best way to approach this in the future, but I think I could have taken a step back at points to give others a chance to fill the air. Because our project manager was less involved in the development of the game, the presentation slides were mostly organised by them. Group members later looked over the slides and gave feedback, and helped populate the slides with screenshots.

Takeaways

The most important thing I learned from this project was that I tend to push my ideas a bit too much in group settings. This, I think, is because I prefer to work quickly — as soon as I am given a task, I will do it. As such, when there is hesitation or silence, or if something hasn't been completed yet that needs doing, I will step in. When working individually, this has been very beneficial for me, though it sometimes leads to rushing into decisions before considering them with proper care. In a group setting, though, I think this can be overbearing. I never pushed anyone to work beyond what they agreed to do, but I did ask for updates frequently and as previously stated was quite vocal in meetings. Because of this, I think some group members may have felt a lack of creative control on the project — I, in contrast, probably had too much. In the future, I would like to work on taking a step back and rolling with ideas that I don't necessarily agree with.

Word Count: 1598