Prototyping Report

Project overview

Event Title:	Local Game Jam	Date: 10.12.19 - 12.12.19
Event Type:	Solo Game Jam	Location: Gjøvik
Author:	Thomas Østli(Thomos), programmer designer. Beginner	

Project Title:

Ballrunner

Technology

Development Environment:
Unity & Visual Studio

Target Platform:
Web based on desktop machines

Code download/install instructions:
Game: https://nihnvm.itch.io/ballrunner
Scripts: https://github.com/nihnvm/Ballrunner

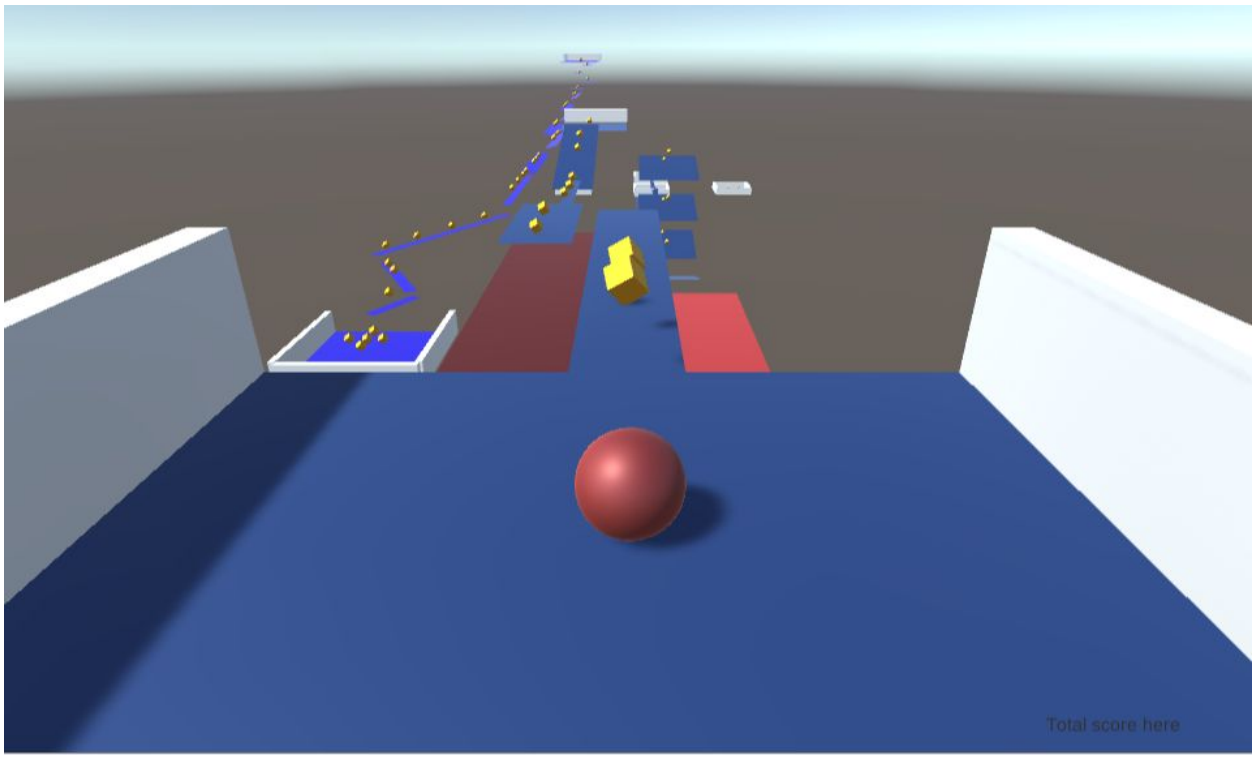
Description

The game is a 3D platformer where you control a ball that must balance it's way forward to collect enough yellow crystals to win, there are supposed to be two stages, one going forward and one backwards, stage two being a lot trickier as you can't quite see very far the direction you're going. One goal is to make it through the track, while gathering all the crystals, which requires you to balance and timing, your movement, controlled with WASD it can be quite tricky and gravity is one's greatest enemy. Another goal is to get a high score, you accomplish this by gathering the crystals as fast as possible, because as the game starts the potential score you can get goes down. For the First "stage" the timer stops at 30 crystals, while for the second stage which is the leftmost path one needs 60, the special thing about this stage is that one

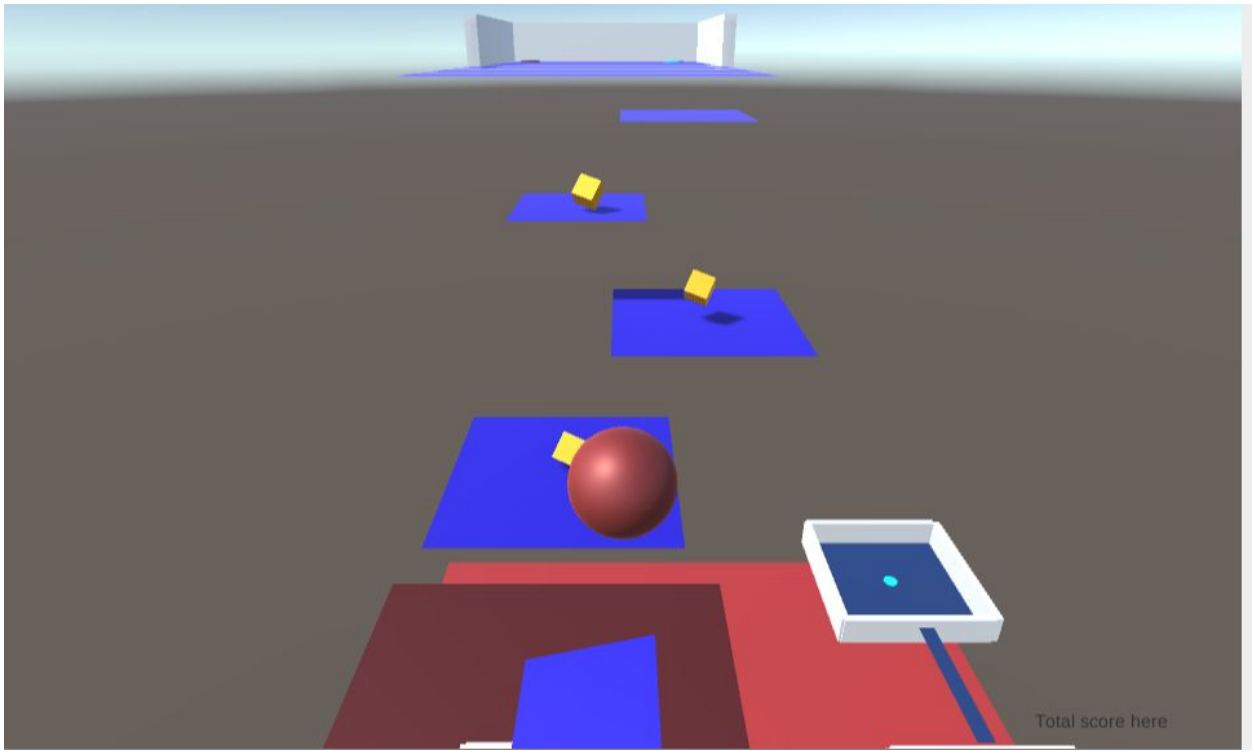
must move the ball towards the camera, and the platforms are angled some degrees. While generally the challenge is to get used to the quirky movement of the ball, managing both long and short jumps, balancing and staying on top of the platforms.

Usually if one falls off the upper platforms one lands on the lower red ones, the corresponding lower platforms will teleport the player back to the beginning of the stage, the intended way to reach the second stage is through the teleporter at the end of stage 1.

Though there is nothing preventing you from entering the opposing stage, one must gather most of the crystals on each stage to stop both scores from going down.



Picture from the starting point



Moving backwards changes the gameplay

Contribution

Only I worked on the game, so I am obviously biased but I think the prototype turned out alright, Given the speed you can achieve is pretty high and there's no penalty for falling and the teleporters work as they do, it became an amusing game with high skill cap from a pretty simple elements. Balancing is quite difficult, while the jumps and platforms can be tricky to navigate but this along with gathering the crystals and moving fast while fighting the clock turned into a simple but enjoyable experience imo, as a prototype.

It has a sandbox feeling to me where it'd be interesting to keep tinkering with it to produce better levels.Though more time was needed to make the level design more streamlined and proper.

Obvious flaws are: You can fall off the map and miss the platforms that teleports you back, making you fall into the void unable to do anything but refresh the browser.

Teleportation devices have a big flaw where they've got no cooldown and they are all two-way teleporters, thus if one is falling downwards one will just keep going through the portal indefinitely unless one manages to steer the ball away, the bottom levels are effectively giant teleporter pads which sends you to the starting area, but since they're 2-way teleporters it'll become a loop if one is falling only vertically.

In one way this can be used to launch the ball very fast and hard from the stages starting pad, so it becomes both a flaw and a feature. https://www.youtube.com/watch?v=jedJyOyelZM

The text messages on screen worked out alright, but I wanted to make more of them, one particularly which would pause the game as one hit the last platform, and display a total score and the total count of crystals captured, out of the total. But this was one of the parts which I struggled with and spent a lot of time on just for it to not work. A menu would also be beneficial, but I realized that would be overscoping.

I am only a novice at using unity, so a lot of things weren't very intuitive to use in the program, but I learned a lot.

I considered using textures to spicy up the visuals a bit, and spent quite some time on this searching around for fitting packs, but the free ones I found were either unfitting or made it look inferior to how it looks now, with simple color materials. I ended up thinking it looks quite fine as it is, especially given the nature of the game I think the visuals of it suits it.

My previous Game Jam was spent tinkering with code and next to nothing of designing levels, therefore it was a conscious decision for this jam that I'd make the mechanics of it quite simple, with a camera that is static and just follow the player, and very basic movement and physics that Unity provided. Though this did take some time to fix as well. (On this I got assistance from https://learn.unity.com/project/roll-a-ball-tutorial). But as I spent little time on the mechanics and coding I got to spend more time creating the actual level, as opposed to my last jam, and using Unity as a tool that way was great fun, my efficiency was low in the beginning but it picked up.

Reflection

The Good:

1. Can be played slow paced for a careful balancing game where one tries to stay up on the platform with a ball that's quirky to control, given the ability to nearly fall and get back up again makes for some exciting gameplay in that staying up is tricky and requires focus. While other good part is that one can do it as a more of a fast paced action where one makes use of the bottom + starting area teleporters transfers to launch the ball doing things quicker and risking more(falling off).
2. Using a tool like Unity was refreshing as opposed to simpler methods that involves coding everything, though I imagine many would prefer that, having a tool that helps you(though which must be learned), is very convenient in that you'll likely get to where you want to be, faster.
3. Simple mechanics makes it a very easy game to pick up and try for a minute, simple win and scoring mechanics makes for incentive to try and replay it. Quick to get the hang of.
4. Overall the experience was good and relaxed, slept alright, ate pretty well, focus was

maintained pretty well, drank a steady amount of coffee.
5. Simple but good visuals overall.

The Bad:

1. Not being as prepared to use Unity as I'd like, though it's a great tool there's a lot of things to get into before one can efficiently use it, and though I'd completed a few tutorials beforehand it wasn't quite enough to make development *fast*, even if the mechanics were somewhat simple
2. The teleporter problem as I wrote about above, it does give the game a certain fun silliness to it, it's an annoying problem and would have to be fixed
3. No borders, one can jump outside the map and into stage 2, this can be good or bad. Ideally the game would be better structured.
4. No jumping! When I first showed my friends the game the first question was, "how do I jump?", which made me realize it'd be a pretty natural thing to include, and not something very hard to implement either.
5. Little instruction of what to do, was on the schedule but ran out of time.
6. Platforms were invisible from below, giving an odd look.

The things that I would do differently are:

1. Prepare better by learning the tool better, Unity is great but confusing when one isn't used to it, in the future I'll spend more time on this beforehand.
2. There's many ways to fix the teleporter issue, one practical way is to create a platform above the exit teleporter in the starting platforms, as to make triggering the collider impossible as you can't reach it, making the teleporters one way only. Simply removing the trigger from the exit teleport is the more correct way of doing it though. For the teleporters near the end of stage 1 should be two way, for them it would be ideal to have simple cooldown timers placed on them.
3. No borders, though a sandbox feel is quite alright, the game could be more structured if visible or invisible walls were added to the game as to separate the levels, or just a sequence which made it so everything restarted if you fell out of the world, perhaps with an invisible trigger below it all, or lava.
4. If time permitted, maybe added boost(sprint) and jumping. Preferably before expanding the play area to a large level, so I could gradually create a better level with those abilities in mind.
5. Added clear instructions, by making time by prioritizing it more.
6. As to remove the invisibility of the platforms when viewed from below, should've used cubes instead of planes.

What Changed:

1. Managed sleep better, didn't rely on energy drinks but used coffee instead to improve focus, had less noticeable brainlag but still got stuck on certain things.

2. Instead of building a game from the bottom up, basically started at a later point with an advanced tool(Unity) that assisted the development process more as opposed to HTML5 Canvas, so instead of coding small things, and never creating a level, I could spend a lot of time creating and adjusting the actual level and gameplay, which was great.

Learning reflection:

Learnt, *or remembered*, that something “simple” can be difficult if one hasn’t learned it properly and worked it into one’s memory properly, a simple thing like adding a camera to a ball can create pause and confusion once the camera is spinning as the ball does. Shouldn’t underestimate, but rather keep resources at hand to rely on instead of wasting time fumbling. Though some parts of Unity are still confusing, other parts like the mechanics of placing, moving, editing shapes and objects became a lot easier as I kept working in the editor.

This time as I worked alone I was reminded of the benefits of working in a group, where if one is stuck on a simple issue(like the teleporter issue), it’d be convenient to have some neutral or reset mind to look at it, as I who was a bit too focused or rather unfocused on the specific problem struggled to find a solution when it was really pretty simple, in hindsight.

Simple mechanics can make for decent experiences, in games I often find the lack of depth a bit disappointing but simplicity was fine too, in this case, in my opinion.