

Deliverable 0

Group name: Circuit City

Team members: Donato Apon, Connor Lariviere, Gedeon Rugema, Tristan Zippert, David DiFrumolo

App Name: Endless Pinball, Category: Smartphone game

App Description:

For this application we plan on creating a smartphone game with a focus on gaining a high score. In this game the user will control various pinball spring launchers and flippers to continuously push the ball across an endless table. The goal is to have the ball collect as many points as possible without letting it fall. This can be done through hitting specific objects, finding secret paths, avoiding obstacles, and moving your ball forward along the table. The user may also further increase their score by hitting multiple coins or other point related objects in succession to create a combo, doubling the points given. The theme of the game will be based around classic arcade pinball machines. The plan is to write the code in Rust WebAssembly with a postgres database. The user will have an infinite amount of tries, and after each failed attempt they will be able to see the leaderboard showing the highest scores along with their score. All the high scores will be able to be viewed through a website. Using the Bevy game engine, in combination with Rust, we can create a simple looking table for pinball as well as obstacles to avoid. We plan on creating a simple artstyle, with bright colors to emulate the feeling of being inside a classic arcade game. For items within the game, we have a few starting ideas. These ideas include an item that will multiply any points gained within an allotted time. Another item will allow the player to quickly launch their ball a great distance, but only for one use. We also plan on including an item that will slow down time to dodge incoming obstacles. The website will simply show the user all of the highscores gathered from the database, as well as the title of our game *Endless*

Pinball. To send the information to the website, we will be using Post and Get requests. These will be sent through the game and sent to the website. Here the website will handle all of that information to compile a scoreboard. In Rust, we can use request crate, which are specifically made for Post and Get requests which will be perfect for this application.

Similar applications to our idea would be games such as *Crossy Road*, *Flappy Bird*, and *Jetpack Joyride*, and *Temple Run*. These games are all based around collecting items and avoiding obstacles with the goal of getting a higher score each attempt. Our game will try to emulate the addictive nature of these games, as well as the fun variety of items. We will also try to allow the game to be simple enough for anyone to quickly pick up and play. That is the main purpose of putting this game on a smartphone, so that it is easier for anyone to play. In *Crossy Road* and *Flappy Bird*, both games are focused on having very simple movement for the player, whilst trying to dodge either stationary or moving obstacles. The games have a very simple premise, which allows the user to quickly understand the goal and mechanics of the game. However, games such as *Jetpack Joyride* and *Temple Run*, contain much more depth within their gameplay. Here the player is allowed to collect coins to purchase cosmetics for their character, as well as power ups to help the start of their next game. They are also able to collect items whilst moving along the map, further increasing their score. They can also collect power-ups mid-run, making the game temporarily easier and switching up the control scheme to add variety. In our game plan on including power ups such as these, which will help the player increase their score or open up other temporary styles of play. For example, we want to be able to have the player be able to double their score, slow down time, or become invincible to obstacles. With these power ups, the player can quickly change their play style and further their high score in ways they normally wouldn't be able to do.

User Stories:

As a user I want to be able to continue my playthrough from where I failed, so I can improve my high score

As a user I want to be able to customize the look of my pinball so I can express my personality through my choice.

As a user I want to be able to have the game save my previous name used on the leaderboard, so I won't have it save my highscore for me.

As a user I want to be able to collect coins so I can spend them on items to start the game with.

As a user I want to be able to tilt my smartphone to move the ball instead of using touch controls so that it is more immersive for me.

As a user I want to be able to adjust the volume of the game because I enjoy when my game is louder so I can feel more immersed.

As a user I want to be able to see my high score as I am playing so I can know the progress I am making.

As a user I want my high score to be saved on my device, so I can quickly compare my scores.

As a user I want to have a tutorial level to quickly learn the basics of the game, so that I won't have to worry about my high score.

As a user I want to be able to select the music I listen to while playing so I get to listen to my favorite song from the game.

As a user I want to be able to select a theme for my board, so that I can further immerse myself in the game and the theme of my choice.

As a user I want to be able to have achievements to collect so I have an incentive to pursue certain play styles.

As a user I want to be able to have side objectives during the game so that I can have a variety in my gameplay.

As a user I want to be able to select a profile picture so I can have it displayed with my high score to further customize my experience.

As a user I want to be able to hear a variety of sound effects so I can quickly react to what is happening based on the sound produced.

As a user I want my device to vibrate when colliding with an object so that I can feel more immersed and quickly understand the situation.

As a user I want to have my device vibrate when picking up an item, so that I quickly react to obtaining the power up.