# Core Concept

This is a 2D endless vertical scroller platformer game. The player must jump on randomly generated cloud platforms endlessly for the highest score in a single game.

# Inspiration Games

There are many vertical platformer games and is not an original concept, but I wanted a game that followed a vertical-held position as it could be easily opened by a user who is normally holding their phone without needing to rotate it.

Doodle Jump is a mobile vertical platformer released in 2009. Something that is unique about Doodle Jump is the style, which inspired the design of my game. I also wanted to simplify the gameplay features, creating a small scope so I could focus on the functionality of the core mechanics, which includes platform jumping.

# Design Pillars

Responsive player touch input – making sure that the user’s mobile device runs the game smoothly with the highest performance and responds fluidly to the user’s constant touch input.

Replayability – the game is endless and should have a reason for the player to return to the game and continue to play over multiple sessions.

Offline playability – the game should be accessible by as large of an audience as possible. Removing the need of an online connection means that users can play it without internet connection, which can encourage the user to play it when they are travelling or are waiting in an area where there is no connection available.

Simple/easy to understand – not all games need have mechanics that overinflate the ability to learn and play the game. A regular person should be able to open the game and quickly understand the rules and get stuck into it.

# Features and Mechanics

* Moving the player using the touch screen input.
* Player can bounce on platforms that help elevate them to the next platform
* Platforms continuously generate a random value along the x axis
* Timer to keep track of how long the playtime has been
* Score system that increments with each platform
  + This score is then added to a high score which is saved locally in player preferences.

# Target Platform and Audience

I want to use the Android operating system for the mobile platform as it is a popular operating system for different brands of mobile devices. Android is also more accessible for downloading and installing the game.

# Interface and Controls

This mobile game uses the touch screen on the mobile device. The user simply needs to use a single finger to touch the player object on the screen to start the jumping and start playing the game. The player must keep their finger on the screen and drag the player side-to-side along the x axis to guide it across each platform.

# Basic Story

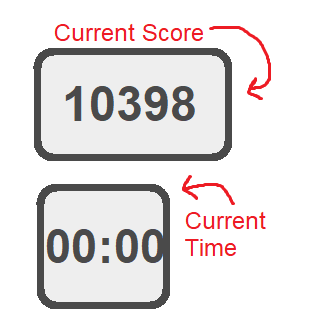
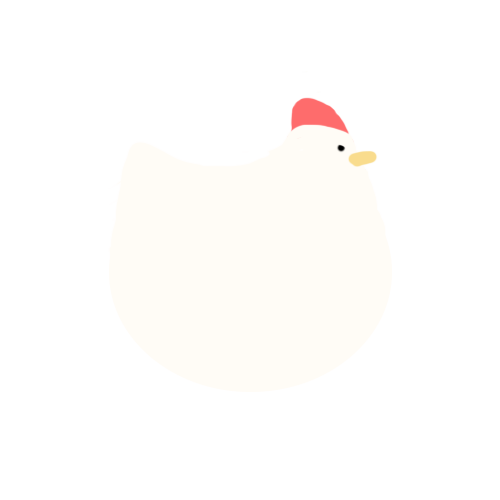
A chicken—a flightless bird—dreams of flying and believes it can fly. Using the help of the player and the clouds in the sky, the chicken can scale upwards into the sky.

# Visual Style

The design was made to be simple, solid, and a flat design. This keeps the look minimalist, as having too many colours/a busy design could make the game harder to focus on for an extended period of time. Since this game is made to be endless, limiting design elements can retain the user’s focus.

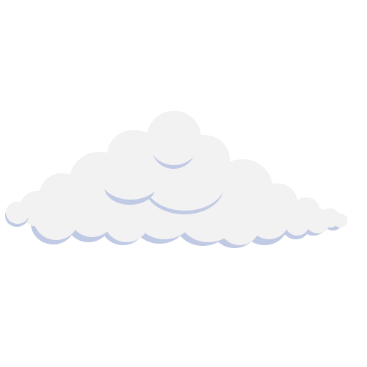
Colours are also dull, utilising mostly shades of blues that match the sky that the player is climbing into. This is contrasted by the beige colour of a chicken player object that stands out from the blue background. This helps the user distinguish between the two.

# Design Sketches



In these sketches I sketched out a player sprite design—a chicken—inspired by a popular crochet pattern. I also sketched out how I wanted the potential design of the time and score, as well as a layout of the vertical platformer.

These sketches above were created very early on in the development process, which helped with planning out the look and structure of the game.



I also have some unused sprites I created when designing the assets. From the left I have a rainbow background with a soft pastel palette that matched more to the blue of the main game, this style ended up getting recycled for my second mobile game. There is also a cloud that would have been used for the long platforms that I sketched out in the layout sketch from before, until the platforms were simplified. On the right was a design for the title that paired with the background.

I ultimately did not decide on the pastel design as I thought the space design in the final version of the game would be more implicative of how high the player could fly to.

# Audio Style

I used a looping music audio that has a fun country tune. The upbeat music is to keep the energy of the game energetic and adventurous while the player climbs higher into the sky. The country theme of the song is to suggest that the game takes place in a farm setting, which explains why the player is a chicken.

Clouds use a soft “poof” sound when landed on, which helps immerse the user into feeling like the player is jumping on a soft cloud in the sky, albeit in a more cartoonish and unrealistic way.

# Known Issues and Bugs

* Player object will stop jumping in certain scenarios. This is due to the jumping and landing on an angle when the player is aligned perfectly with the top of the platforms which restricts the small amount of distance needed to fall to bounce back up. The object can continue to jump if the user moves their finger across their screen slightly, which will continue the gameplay.
* If the player enters the main scene at least once (eg. Entering the main scene, exiting to the title screen, then entering back into the main scene), the UI correctly starts back at 0m, but once landing on a platform, the high score is added onto the main scene UI.
* Camera jittering if the player collider is against the border collider.
* Some devices will experience a brief scene loading graphical glitch where all the sprites and assets are loading into the scene.
* Depending on the user’s mobile device, some sprites will be cut-off which make moving the player to platforms spawned at the very edge of the screen difficult to reach.

# Future Improvements

In the future I would love to expand the game to add new features. This game focused on the main functionality of important mechanics, so added content to further improve the enjoyment of the game like collectibles, transitioning backgrounds, etc.

I would also improve on some quality-of-life aspects of the game, like tweaking how the camera follows the player to resolve any jittering of the camera, or graphical issues by adding a loading screen. I would also like to perfect modularity between a range of mobile devices to fix the sprites that are fitted to a small range of aspect ratios.

# Important Links

Itch.io game link - <https://erikastuart.itch.io/chickens-can-fly>

Presentation - [1-mobile-presentation-chickenscanfly.zip](https://otagopoly-my.sharepoint.com/:u:/g/personal/stuaet1_student_op_ac_nz/EQs7PAh0zVVCqg7XcW6liagBLDykn2XiOAdInXA85zF6pg?e=nBCpg6)

Github - <https://github.com/erokasyuart/erika-mobile-dev-1>