■ The Flight of Fergus Buchan / Jul 2020

Genre: Narrative, First-person Adventure

**Development Status:** Incomplete

Engine: Unity

Platform: PC, Xbox One

My Roles: Co-Founder, Game Designer

Embark on a mystical journey through the breathtaking highlands of Scotland as you unravel the mystery of your missing grandfather. As you follow in the footsteps of your missing relative, you'll explore the ancient, rugged landscape and encounter mythical beings, uncover secrets about your childhood home and immerse yourself in the rich culture of Scotland as you unlock the memories of your Scottish upbringing. In this immersive first-person adventure game, you'll be transported to a world of magic and wonder as you solve the mystery of your missing grandfather.

Core Responsibilities
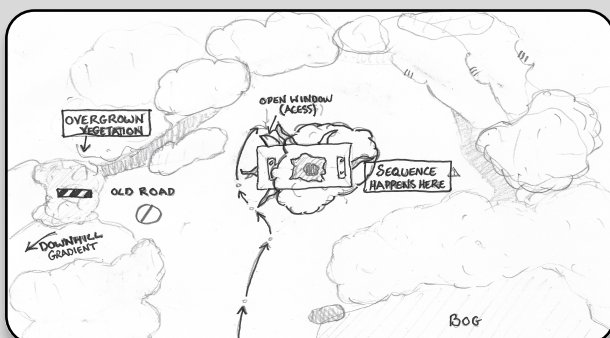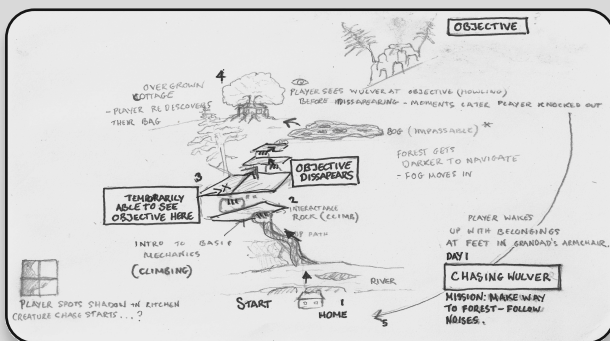
- Team and project management
- Leading meetings and conducting business communications with outside organisations
- Creating and presenting pitch decks to potential investors, such as Chroma Ventures, private individuals through SOSE
- Creating script for game's story
- Conceptualising, designing, grey-boxing level design.
- 3D modelling assets for game environment and characters
- Managing Discord server for communication
- Creating and managing schedule using Hack n' Plan
- Adjusting tasks as necessary to ensure development is on track

Designing and Blocking Out the Game World

- Created a level design concept inspired by the Scottish coastline

- Included various geographical landscape features that can be found in a remote Scottish village

- Wanted to make the environment feel distinctly Scottish

- Player has a base to return to each day and the entire level is explorable

- Different areas and places in the level design help the player orient themselves within the environment
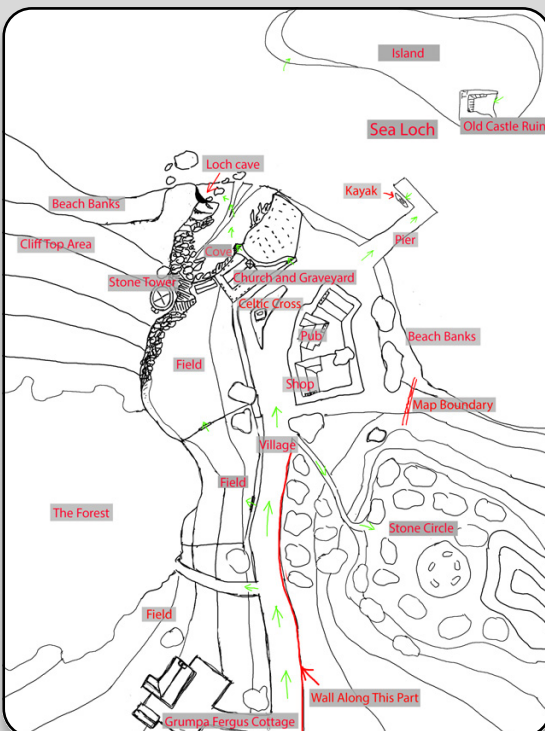

- Emphasis on secrecy and mystery in the game's environment and nearby village

- Imagined and drew potential paths for the player to take within the level

- Environment intentionally directs player towards the coast and village, but also includes key story areas

- A portion of the adventure takes place in a nearby forest and close to the player's home base

- These areas would be refined and split into sections for further development to gain a better picture of the story's environment.

Designing and Blocking Out the Game World
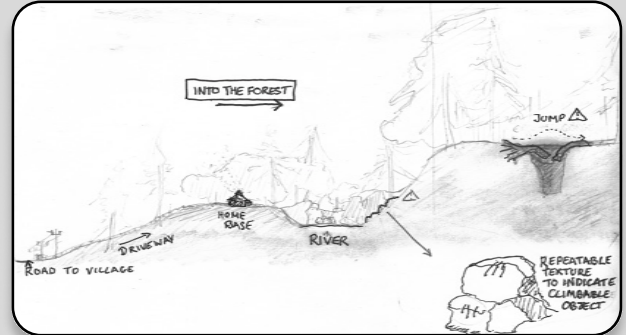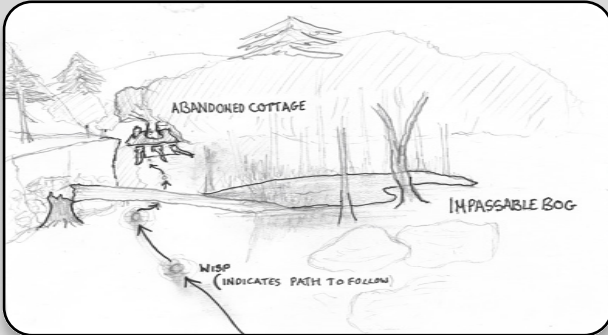
- Sketches of the levels were created to help an understanding of the feel, look, and scale of the environment

- The artist turned the concept drawings into colourful depictions of the environment, which helped an understanding of the overall theme and look of the game.

- Inspired by Campo Santo, he first part of the the tutorial mission to enable an understanding of the flow of the level.

- Using free open source software, such as Blender, we created assets to aid in blocking out the levels.
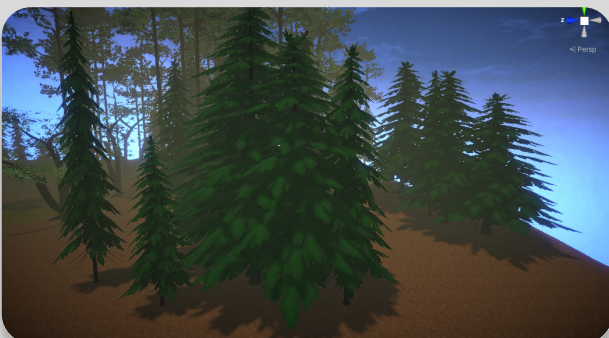
◼ Challenges and Iterations

Scope and Scale of The Project

- Crafting a compelling story and immersive environment

- Identifying the scope and structure of the game, including mission goals and locations

- Organising and prioritising ideas and story goals using post-it notes and other planning tools such as Hack n' Plan and Discord

Downsizing, Re-writing, Re-designing
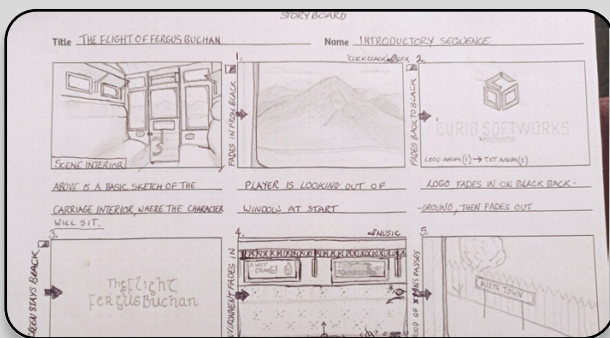
- Initially planned to introduce story through interactive cut scene where players arrive by train

- Realized this was not feasible due to the scale of the game and story

- Decided to introduce the story through illustrated artwork and voice-over instead

Networking for Success

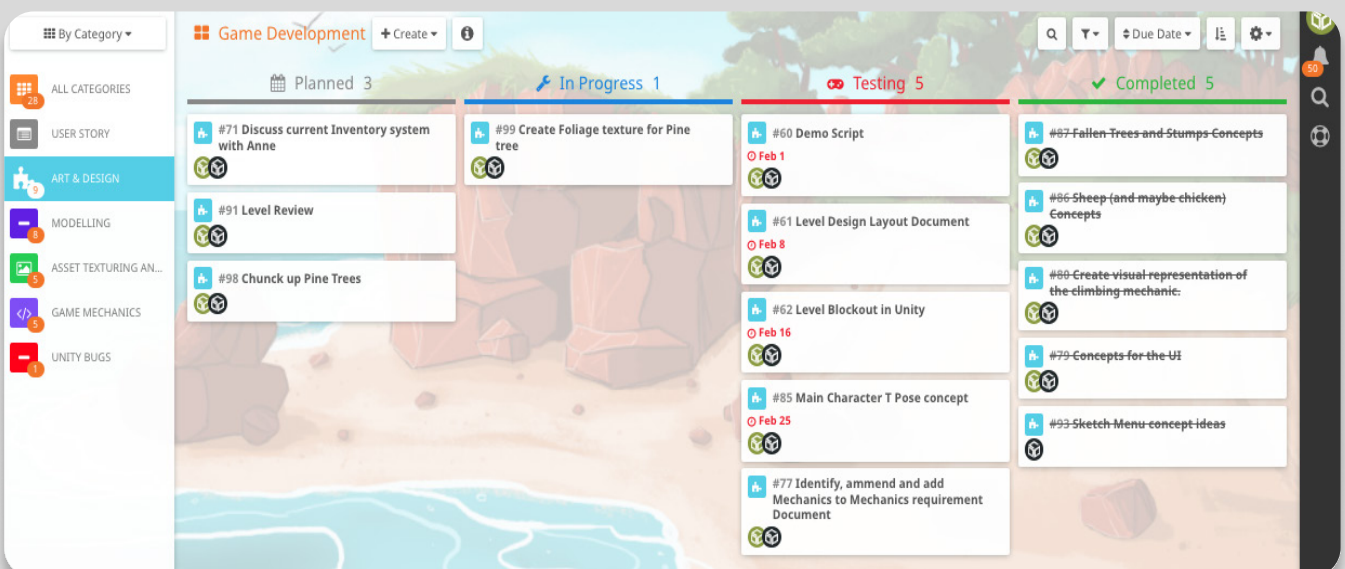- In order to achieve our goal of creating a game that promoted Scotland internationally, we sought guidance from organizations such as the Scottish Games Network and consulted with Brian Baglow, who had previously released podcasts on the lack of such games.

- Our business goals and project addressed these issues, and we sought advice from Mr. Baglow on how to become self-sufficient in order to achieve our objectives.

Workflow

Tech Stack

- Utilized Unity, Photoshop, Substance Painter, Blender, Google Workspace, Discord, and Hack n' Plan to advance project

- Implemented Kanban boards with Hack n' Plan for task management and team coordination

- Used Atlassian Sourcetree as a git repository for version control and Google's git hosting service

- Ensured team members were proficient in using the version control system to track and manage changes to the codebase without creating merge conflicts.

Workflow

Development Process

Research, conceptualise idea, write up game design document

Dependencies: Game Design Document

Draw out level design concepts, sketch out various in game features

Dependencies: Level Design and Features

UI / UX Wire-framing is created in Figma to visualise user experience and user interface of the game before further development in Unity

Dependencies: UI / UX wireframe to define layout and structure.
2D Assets from Adobe illustrator

Develop game and iterate through designs

Review and Update

Dependencies: FMOD software and audio assets

Dependencies: Git hosting service

Dependencies: Game Design Document / Artwork

FMOD, used to create, manage, and play audio

Git repository (Sourcetree) Version Control and backup

Create, texture and import 3D Asset into Unity

■ Project HighNoon / Nov 2022

Prototype: Project HighNoon

Spawn Train
Spawn Bandits

Enemy Speed
Train Offset

Genre: Casual, Endless Runner

Project Status: Ongoing

Engine: Unity

Platform: Mobile/ PC

My Roles: Game Designer & Artist

▶ [Click to Try Prototype](#)

Hop aboard Project HighNoon, a wild and exciting endless runner Tower Defence game that takes you back in time to the Wild West! As you travel across the countryside aboard your trusty train. Upgrade and fortify defences, withstand waves of Native American and bandit attacks. With each stop a new station, you'll have the chance to sell your cargo and use the profits to become even more prepared for dangers that lie ahead. But beware - the further you journey into uncharted territory, the more treacherous the journey will become. This project is being created in partnership with a fellow Abertay alumni.
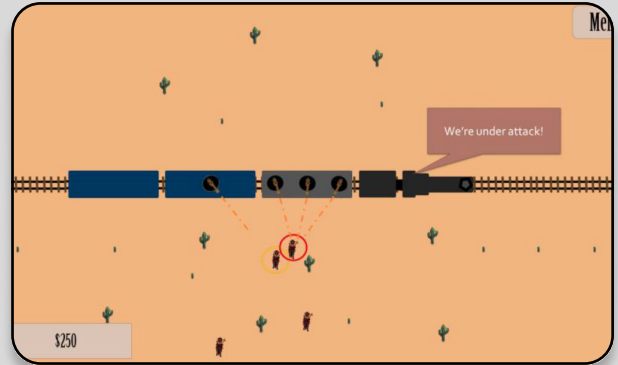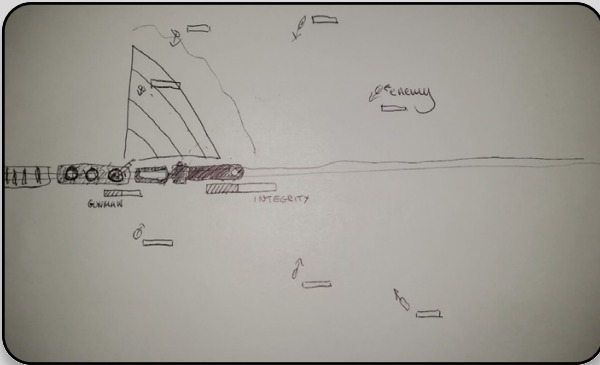
Core Responsibilities
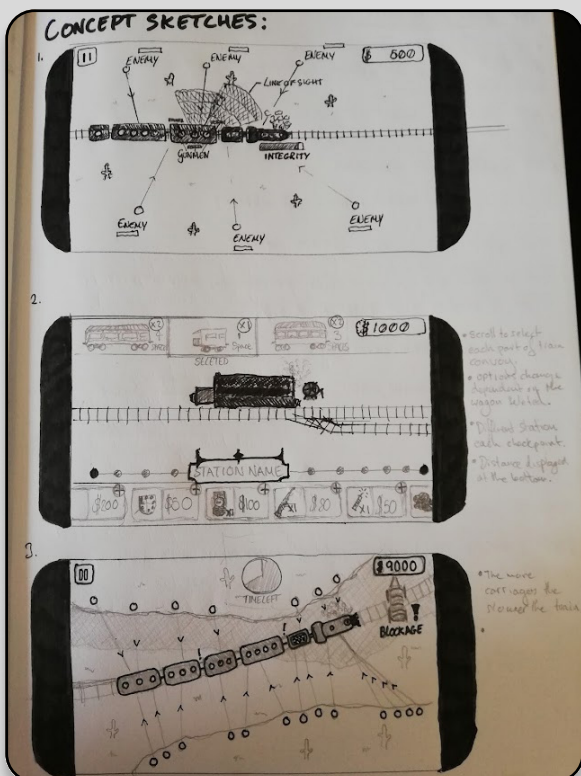
- Developed the overall concept and design for the game, including mechanics and level progression.

- Created design documents, such as game design specifications and wire-framing, to clearly communicate ideas.

- Collaborated with programmer to ensure that our design vision is properly implemented.

Design Challenges

- Concept inspired by Bloons Tower Defense

- Initial concept as a 2D game, but changed to 3D due to cleaner aesthetic look

- Maintaining player engagement
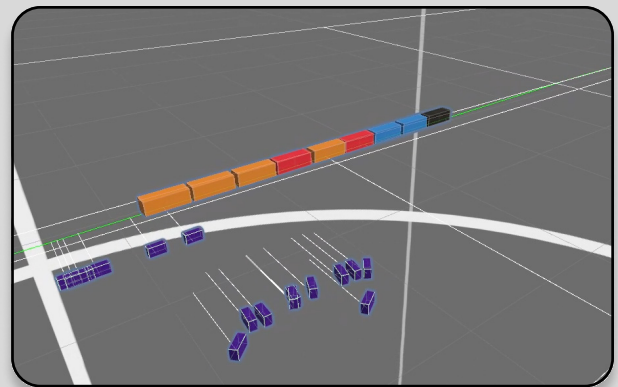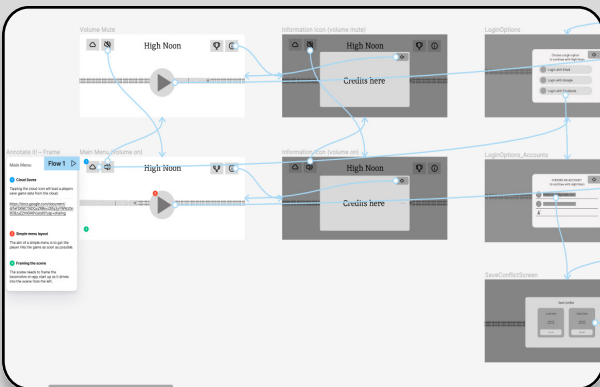
- Optimising performance with object pooling which will improve game performance on various devices.

- Enhancing playability by allowing the player to spend their in-game money to increase the value of their payout by increasing the defence capability of the train and allowing them to take on more dangerous routes (challenges).

■ Workflow
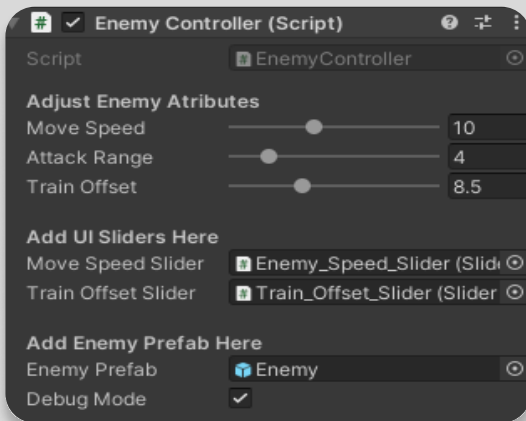

```
[Header("Adjust Enemy Atributes")]
[Range(0.0f, 25.0f)] public float moveSpeed = 10.0f;
[Range(0.0f, 25.0f)] public float attackRange = 5.0f;
[Range(0.0f, 25.0f)] public float trainOffset = 5.0f;

[Space(5)] // Add 5 pixels of empty space
[Header("Add UI Sliders Here")]
// Public reference to the SliderController script
public SliderController moveSpeedSlider;
//public reference to the SliderController script
public SliderController trainOffsetSlider;

[Space(5)] // Add 5 pixels of empty space
[Header("Add Enemy Prefab Here")]
public GameObject enemyPrefab;
public bool debugMode = false;
```

- Formatting the custom editor tool in the inspector to make it easy to adjust values, balance the mechanics and other features of the game.

- This makes the development process easier; and allows experimentation to be done quickly; it also helps finding the best gameplay balance.
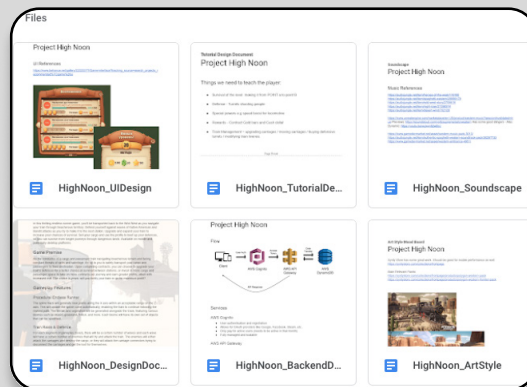
Pre production

Concept Sketches

↓

Update Game Design Document

↓

Mock-up in Photoshop

↓

Wireframe UI/UX with Figma

- Collaborating on Unity project with friend

- Using Sourcetree for version control

- Software: Photoshop, Blender, Google Workspace apps, Discord, Figma, Unity

- Used Figma to begin designing user experience flow in the game

- Created design documentation using Google Docs

- Utilised Photoshop for creating concept art

Gerbils: Flight Academy / Dec 2022

Genre: Casual, Endless Runner

Project Status: Ongoing

Engine: Unity

Platform: Android

My Roles: Game Designer & Artist

Play Current Build

Get ready for an adrenaline-fueled experience with Gerbils Flight Academy - the sequel to the beloved Gerbils game. Take the controls of your own gerbil aircraft and navigate through a maze of obstacles in the sky. Score big by outmanoeuvring incoming missiles and upgrading your aircraft for even higher flights. Join the elite ranks of top gerbil pilots and see how long you can fly! Soar to new heights and enjoy endless, high-flying fun with Gerbils Flight Academy

Core Responsibilities
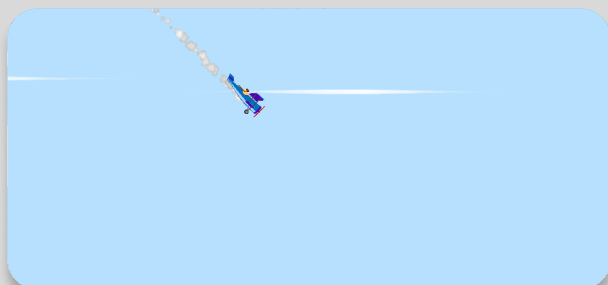
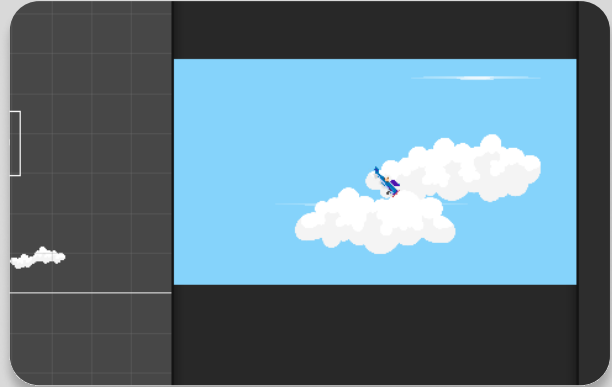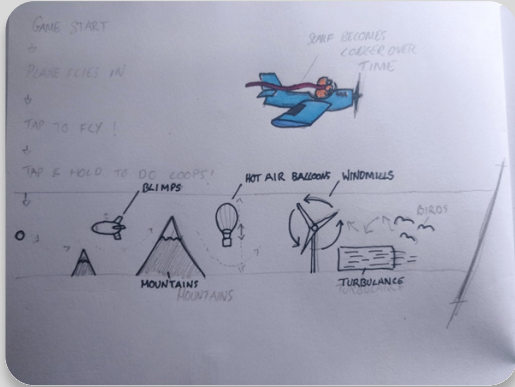- Designed and created all artwork, characters and environments
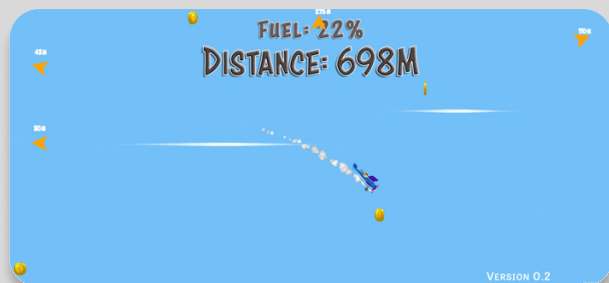
- Built a prototype to test the main mechanics

- Solely developed the game, including implementing gameplay mechanics, levels, and features

- Optimized game performance, fixing bugs and improving playability through play testing and iterative development

Design Challenes

- Balancing the game features, mechanics, and challenges with practical considerations for coding has been a challenging yet fulfilling experience

- The development process for player mechanics involved a continuous iteration cycle to achieve a functional model for the game

- Crafting a captivating experience that involves both reward and challenge is key. Finding the right balance between reward and punishment. Ensuring the player feels progression even in the face of failure

- The goal is to create a seamless, enjoyable experience for the player through the use of simple gameplay mechanics, and to enable the player to achieve high replay value. This is achieved through the use of visual and auditory cues, such as particle effects, explosions and sound effects

■ Workflow

Development Process

Conceptualise idea, write up game design document

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Dependencies: Level Design and Features

UI / UX Wire-framing is created in Figma to visualise flow of the game before further development in Unity

Dependencies: UI / UX wireframe to define layout and structure. 2D Assets from Adobe illustrator

Develop game and iterate through designs

Update

Dependencies: FMOD software and audio assets

Dependencies: Git hosting service

Dependencies: Game Design Document / Wireframe

FMOD, used to create, manage, and play audio

Git repository (Sourcetree) Version Control and backup

Create and import graphics into Unity

- Integrating FMOD into this project has streamlined part of my workflow. Using third party plugins such as this within Unity enable the output of high quality production

Gerbils / 2019

Genre: Casual, Endless Runner

Project Status: 6 Months, Published

Engine: Unity

Platform: Android

**My Roles:** Game Designer & Artist

[Play Store](#)

Get ready for endless fun with Gerbils, the action-packed game that's all about launching your gerbils as far as possible! Using springboards and boosts, you'll send your gerbils soaring through the air, collecting coins and racking up points along the way. But there's more to Gerbils than just pure entertainment - this game was created to investigate player retention through exposure to free-to-play advertising. Specifically, I wanted to see how rewarded advertising affected player engagement and retention. From design to publishing, this project was completed with the possibility for further expansion and DLC. You can find Gerbils on the Google Play Store.
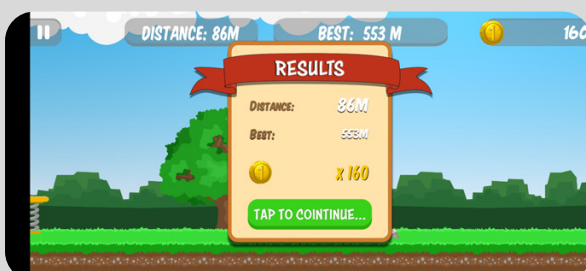
Core Responsibilities

- Sole game designer for project

- Responsible for gameplay mechanics, level design, overall player experience
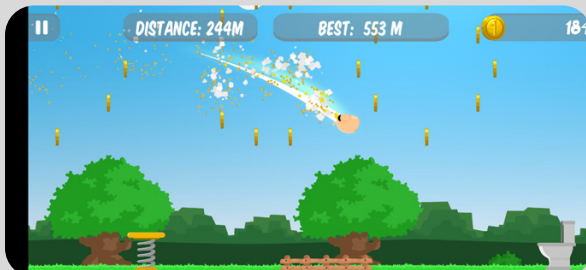
- Used Unity to develop and test gameplay and user interface elements

- Created and integrated 2D assets using Photoshop and Illustrator
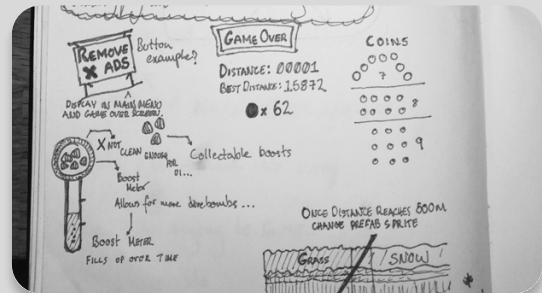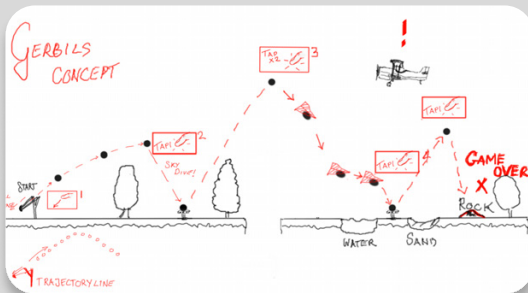
- Managed project with Trello and met all deadlines

- Conducted competitor research and ensured final product was well-received

- Successfully uploaded and verified game on Google Play, meeting all guidelines and suitable for target audience

Design Challenges

- Decided to develop an endless runner style game for gerbils to tap into the popularity of hypercasual endless runner games.

- Addressed challenges of creating a sense of progression and replayability through implementing random obstacles, an upgrade feature for players, and changing seasons to indicate progress. Tested the game through advertising for feedback and sharing with friends and family.
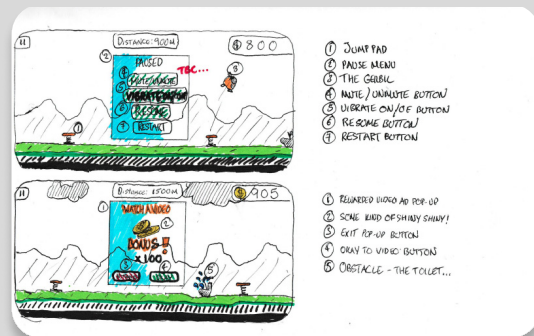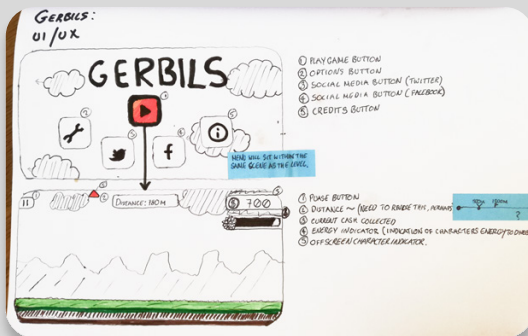
- Ensuring the User Interface matched the style of game was important. creating a seamless flow into gameplay was also important. Making less of a barrier to play after hitting play was important to me.
- I used Adobe XD to wireframe the User experience initially which helped itentify the optimal UI flow for the game.

- To ensure the game stays simple there are two simple actions: dragging and tapping. Players launch a gerbil then tap to dive, while utilizing springboards to increase the speed and distance of their gerbil.

Workflow

Development Process

Conceptualise idea, write up game design document

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Dependencies: Level Design and Features

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Dependencies: UI / UX wireframe to define layout and structure. 2D Assets from Adobe illustrator

Develop game and iterate through designs

Update

Dependencies: Unity cloud services

Dependencies: Game Design Document / Wireframe

Unity Collaborate to manage development iterations

Create and import graphics into Unity