

Your project title: 2D game construction in Swift

Report Name	Project Outline
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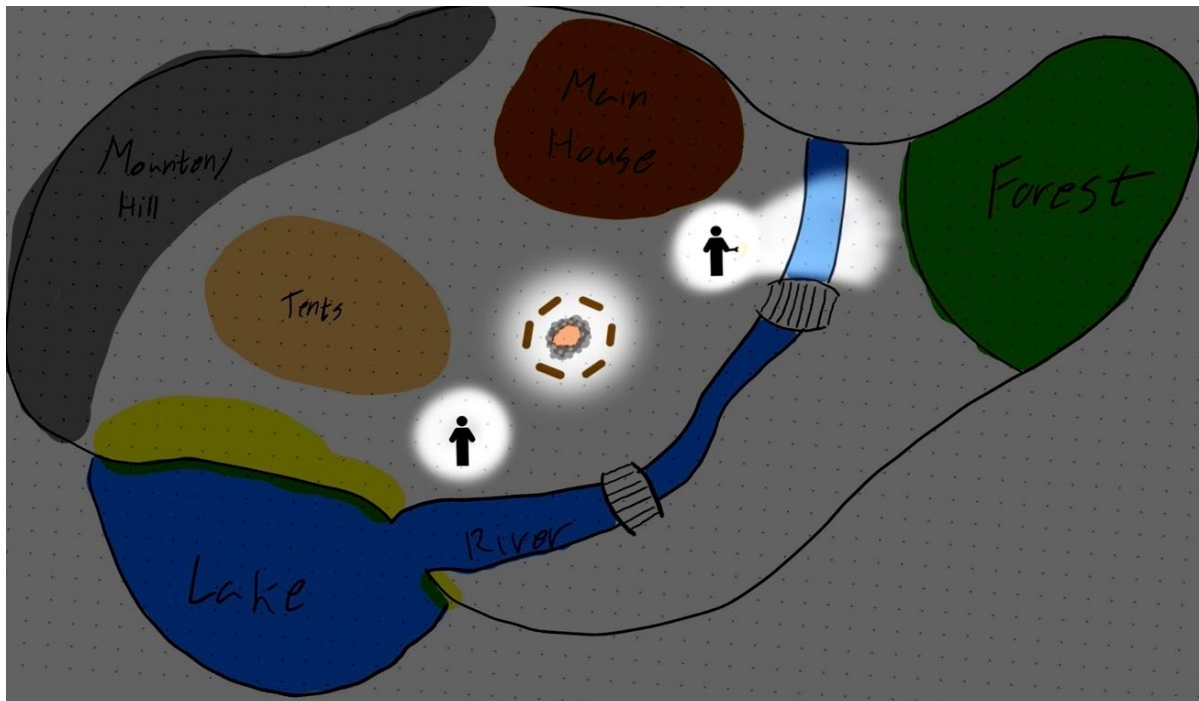
1. Project description

My project is to develop a 2D game for iOS. My game is inspired by the classic game of Hide and seek and the recently popular game of 'Among Us'[1]. Among Us is a multiplayer game where one person is an imposter and they are trying to kill the rest of the players without being caught.

My game will be a single player game where the player is either the seeker or one of the hiders. When the game starts everyone will spawn around a campfire in a forest at night. The hiders are tasked with finding places to hide. After a certain amount of time has gone by the seeker will start seeking. The players will have limited vision, but if the players can see any light source (such as a campfire) they will be able to see further. The seeker will have one advantage where they can use a flashlight to expand their line of sight.

Here are some of the important features of the game:

- I want to implement endurance. This will work on the basis that certain hiding places (like hiding in a tree or in a lake) will make the character tired, so they can't stay there for more than a given period of time. If this time runs out, they will start taking damage.
- Health is going to be a minor thing in the game as well. Every person has a certain amount of health and if they lose all their health (e.g. through running out of air while hiding in a lake) they will lose the game.
- Certain hiding spots will not cause the character to endure harm, however they will make a small noise every so often, risking their exposure to the seeker.
- The seeker will be equipped with a flashlight which will give them a longer line of sight, but this can also be used to look into hiding spots like tents or bushes.
- Batteries will be a crucial part for the seeker. When the seeker is using the flashlight it will slowly lose power and if the batteries run out it will no longer be able to be used.



I would need to design a map, and decide on how the light is going to work in-game. Above you can see an image of which sections I want to have and a simple design of the map. As you can see on this map there are some bright spots, those are players and the campfire. The player at the top right is a seeker using their flashlight to look across the river, and you can see that it extends their view. The player at the bottom of the screen would see the light area around them and the light coming from the campfire. Any player shouldn't be able to see the lit up area around other players unless they are using a flashlight.

2. Proposed tasks

- Investigate Among Us[1]
 - This will help me with making design decisions for the game, as I will be able to take the feedback from users and implement this into my final product.
- Setting up a private git repository using GitHub.
- Setting up different tracking methods
 - Tools such as Google Docs and Notion will be used to track my progress and make sure tasks are completed and documented.
- Design
 - I will be using tools like Figma and Xcode storyboards to design my game and to create a prototype.
- Planning
 - In order to plan out the work and ensure I meet all the requirements (including those set by myself), I'm planning to use a mix of agile development techniques (such as stories and sprints) to effectively complete my work and provide opportunities for analysis and improvement in my technical aspects.
- Development

- This will be the main technical aspect of the project. This will involve implementing and tweaking the design to fit the technical aspects, as well as adding the functionality and debugging any issues.
- Project meetings will be held weekly with my supervisor (Chris Price) to monitor progress made and resolve any issues. We will discuss and review any documents.
- Project Diary
 - I will create an online blog on a tool like Notion where I will discuss and explain my problems and solutions in more detail.
- Preparation for demonstration
 - I will create slides to demonstrate the game and create a summary of my experience on certain points.

3. Project deliverables

- Mid-Project Demonstration Notes & Slides
 - Slides and notes on my progress, and a summary document stating my progress and issues.
- iOS Game
 - This will be the main deliverable of the project.
- Test Scripts
 - A document with manual tests, and an explanation of any automated tests. How this will be created and performed will be discussed with my supervisor.
- Planning Documentation
 - This will be a mix of documents, including a backlog of work to be completed and story planning/sprint boards. This will form either a separate document or part of the final report.
- Final Report
 - This document will be the report and associated appendices. In addition to discussing the work, there will be acknowledgement for any 3rd party libraries, frameworks and tools that are used on the project.
- Final Demonstration
 - Slides and notes on my progress, and a summary document stating my progress and issues.

4. Initial annotated bibliography

The following is a simple list, i.e. not using EndNote or Microsoft Word's Referencing tool. You could insert any citations as cross-references in Word [1][3][3][4].

- [1] InnerSloth LLC. 2015. Among Us (2020.11.17).
<https://apps.apple.com/gb/app/among-us/id1351168404>
- [2] Caroline Begbie, Mike Berg, Michael Briscoe, Ali Hafizji, Marin Todorov and Ray Wenderlich. 2D Apple Games by Tutorials Second Edition. ©2017 Razeware LLC.
- [3] Mark Moeykesn. SwiftUI Animations: Mastery v1.0. Big Mountain Studio
- [4] Mark Moeykesn. SwiftUI Views: Mastery v2.0 Big Mountain Studio
- [5] Mark Moeykesn. SwiftUI Views Flashcards: Control View Deck v1.0. Big Mountain Studio
- [6] Mark Moeykesn. SwiftUI Views Flashcards: Other Views Deck. Big Mountain Studio
- [7] Apple. Develop in Swift. Fundamentals Xcode 11.
- [8] Apple. Develop in Swift. Explorations Xcode 11.
- [9] Apple. Develop in Swift. Data Collections Xcode 11.
- [10] Mark Moeykesn. SwiftUI Views Flashcards: Control View Deck v1.0. Big Mountain Studio