

Final Project Plan

Brief description of the problem

User wants to play an adventure game.

How you plan to solve it with your app

The game will have 1 character going through an adventure with 5 stages. The adventure will tell the story of the character who is on a quest. The game will be playable only in landscape mode. The game will keep track of how many stages the player has completed.

The app will be written in Swift using Cocos2D and SpriteBuilder.

Each stage will be a minigame as follows:

Stage1: Jumping scroller of doom

- Player will be on the ground (bottom of screen), facing right, and will be stationary relative to the screen.
- Obstacles of varying sizes will spawn from the right and move towards the player.
- Player has to jump obstacles by tapping.
- Some obstacles will be “special” obstacles. The player has to time their jump to land on the special obstacles.
- The stage ends after the player jumps on five special obstacles. A counter will be displayed to indicate how many have been jumped on.
- Some obstacles will be too high for a single jump and require the player to jump on a shorter obstacle first.
- If a player collides with a regular obstacle, they will be pushed to the left until they jump.
- If a player collides with a tall obstacle, they will be pushed offscreen and die.
- If a player collides with a special obstacle while on the ground (not jumping), the obstacle will explode.
- The player dies if they are hit by 3 special obstacles or pushed offscreen.

Stage 2: Shoot arrows at monsters of doom

- Player will be placed on left side of the screen and will be stationary relative to the screen.
- Monsters will appear from random locations on the right side of the screen and run towards the player.
- Monsters will have randomized movement speeds.
- Player must shoot monsters before they reach the player. Player taps the screen and an arrow is released in the direction of where the player tapped.

- The stage ends after the player kills 20 monsters. A counter will be displayed to indicate how many have been killed.
- Monsters will die in one shot but the spawn rate increases over time.
- Player dies if 3 monsters reach the player.

Stage 3: Wind tunnel of doom

- Player will be start on the right side of the screen, and must reach the left side.
- Wind will be generated from the left side. Player will be pushed to the right into a pit.
- Player must repeatedly swipe screen right to left in order to move leftwards and not be pushed into the pit.
- Swipe direction also moves the player up or down.
- Arrows will randomly shoot top to bottom or bottom to top. Player must avoid them by swiping to move forward or by letting the wind push them backwards.
- Player dies after 3 arrow hits or if they are pushed into the pit.

Stage 4: Pendulum of doom

- Player will start in the bottom-middle of the screen.
- Player can move side to side by pressing controls displayed on each side of the screen.
- A ball will be swinging like a pendulum at the top of the screen. A portion of the ball's circumference is red, the rest is blue.
- The player must shoot the blue portion. Player taps the screen and an arrow is released in the direction of where the player tapped.
- If the player hits the red portion, the ball explodes and hits the player with acid.
- The player must shoot down 5 of the balls. The player dies after 3 acid hits.
- The red portion of the ball gets bigger with each progressive ball that the player shoots down.

Stage 5: Coconut-laden swallows of doom

- Player will start in the bottom-middle of the screen.
- Player can move side to side by pressing controls displayed on each side of the screen.
- There will be 3 fixed cannons spaced evenly along the ground.
- Swallows are randomly spawned and fly left to right or right to left. Each bears a coconut. Each swallow will randomly drop the coconut.
- Player must avoid falling coconuts.
- Player shoots birds by moving to a cannon, swiping in a semi-circular motion to set the angle of the cannon, and tapping the cannon to fire it. The player must be near a cannon in order to shoot it.
- After shooting a cannon it cannot be used again until a different cannon is fired.
- Cannon balls move in a straight line until off screen or hits a swallow.
- Player must kill 5 swallows. Player can die after 3 coconut hits.

The game ends when the player completes all stages. An appropriate reward will be displayed.

List of User stories (in order of priority)

- As a user, I want to choose to start a new game.
- As a user, I want to continue playing my previous game.
- As a user, I want to replay stages I have previously completed.
 - When the game starts, the user will be shown a screen with the above 3 options.
 - Starting a new game will delete the previously saved game.
 - An appropriate warning will be displayed about losing the saved game and the user will be allowed to cancel the choice.
- As a user, I want to see the count of stage objectives I have hit/killed and how many lives I have left.
 - At each stage, an objective counter and a life counter will be displayed.
 - The counters should be displayed in a consistent location across stages.
- As a user, I want to know the objectives at the start of the stage
 - The beginning of each stage will display an image with annotations to quickly show what the user has to do.
- As a user, I want to choose the gender of the character (stretch)
 - At the start of the game, the user will be shown a male and a female character.
 - The user clicks on the desired character.
 - The gender of the character will be saved with the game. Once selected, the gender cannot be changed. However, the user will be offered the choice again upon starting a new game.