

Game Proposal

CPSC 427 Winter 21/22 - Team Robinson (Team 13)

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GAME TITLE

Island of Lost Souls

STORY

Island of Lost Souls is an action-exploration and card combat game. As the player, you head to a remote island on the hunt for buried treasure. The catch is that once on the island, you are only handed a partial treasure map. The remainder of the map is scattered in multiple pieces, each guarded by “Bosses” on the island. You must travel the island in search of the Bosses, defeating them one by one until the map is completed and the treasure is revealed. Each Boss that is defeated opens up a new section of the island, as well as fills in part of the treasure map. Throughout your journey, different enemy types will also be encountered. However, you will be able to acquire cards by looting chests and battling enemies, where each battle consists of a card game. The cards themselves carry the lost and captured souls that have perished before you; challenging a Boss before building up one’s arsenal of cards would be unwise.

TECHNICAL ELEMENTS

Rendering

- Character and enemy sprites and interactables rendered in pixel art
- Map consists of scrolling tilemaps, with elements like player’s character and Bosses layered on top

Assets

- Basic sprites for the player’s character and tiles
- Sprites for each enemy and Boss type
- Objects to be placed on the map (e.g. bushes, trees, rocks, etc.)
- Interactables such as chests where the player can acquire cards for use in combat
- Background music as the player traverses the map, as well as audio feedback for certain player and enemy actions (e.g. opening up a chest, first time a Boss is encountered, etc.)

2D Geometry Manipulation

- Player's character has an idle animation when standing in place
- Other animations include opening chests, acquiring cards, and enemy movement
- Enemies and Bosses are spawned randomly during each new game
- Map is custom made: Each Boss will have its own unique biome (e.g. desert, forest, etc.); cards, enemies, and Bosses will reflect this detail
- Map is viewed from a top-down angle during exploration, and a side-view angle during battles

Gameplay Logic

- Adventure style game mixed in with card combat: Gameplay consists of player traversing the island and acquiring cards that can be used in combat when battling enemies/Bosses
- Character pathfinding takes into account aforementioned objects and tiles (i.e. as an alternative to WASD keys, the player can click on the map and the shortest path is taken)
- Enemy pathfinding (prior to card battle) consists of pre-defined movement; enemies move towards the player's character once in range
- Health is dependent on the amount assigned to an acquired card; a player fails a battle once the total health of all cards played during a battle are depleted
- Damage incurred is also dependent on the attack strength assigned to an acquired card; cards may potentially be imbued with statuses/abilities, according to the current biome the player is in

Physics

- Collision detection with enemies, chests, and other obstacles placed throughout the map

ADVANCED TECHNICAL ELEMENTS

Saving Game State and Reloading

- The player can save the current state of their game and reload it from where they left off. Cards that the player has already acquired in their deck will be kept. However, enemies will re-spawn, and opened chests will reset (with new cards) upon reload of the game
- Should the player prematurely close their game without saving, the game will be reloaded from the last biome/section of the island the player had unlocked
- Without this feature, the player will be impacted by losing all current progress; the alternative is to have the player restart from the beginning of the game

Rogue-lite Mode

- Should the player die, they restart the game from the beginning. However, a new, overpowered card (called a soul card), is added to the pool of findable cards
- Otherwise, the player will restart from the last save point (if implemented) or biome; the alternative is to have the player restart from the beginning of the game, but without the added soul cards

Difficulty Levels

- The player can re-play the game at harder difficulties with more advanced Boss AI
- This feature will give the player motivation to re-play the game and to attempt harder difficulties
- As an alternative, the difficulty level can simply be increased by making it more challenging to acquire good cards and by increasing Bosses' health without improving actual AI

Procedurally Generated Map

- Rather than having a custom-made map, each biome/section of the island is procedurally generated with random traversable paths
- Generating random maps adds replayability as the island will not always look the same; the alternative is to manually place the tiles over a grid or iterate over a sprite sheet

Card Battle Animations

- Addition of animations when the player deals damage to an enemy/Boss, and vice versa
- This feature makes the gameplay more visually appealing; the alternative is to only show the total health of the player's character and enemies/Bosses increase/decrease according to how much damage was incurred

DEVICES

Keyboard input is the primary layout for control. Examples include WASD to move the player's character, or using E or Spacebar to interact with certain elements (e.g. chests). Mouse control will also be supported during card combat to choose cards from one's deck (i.e. drag and drop cards to be played in a battle).

CONCEPTS



Figure 1: Final product will use pixel art for island/map and all other elements

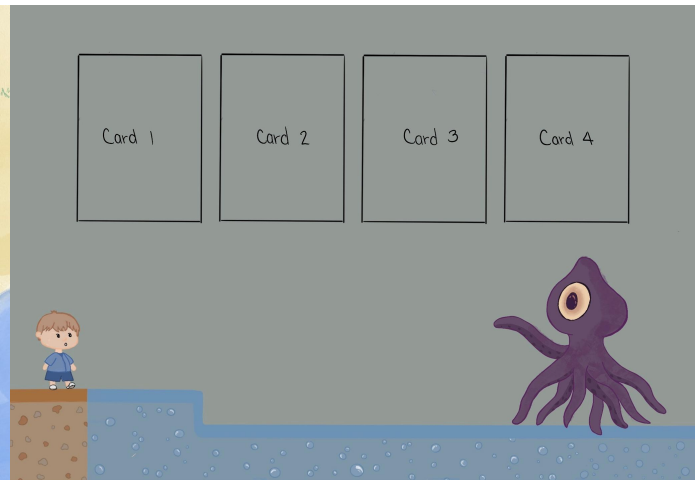


Figure 2: A sample card battle with a Boss (water biome)

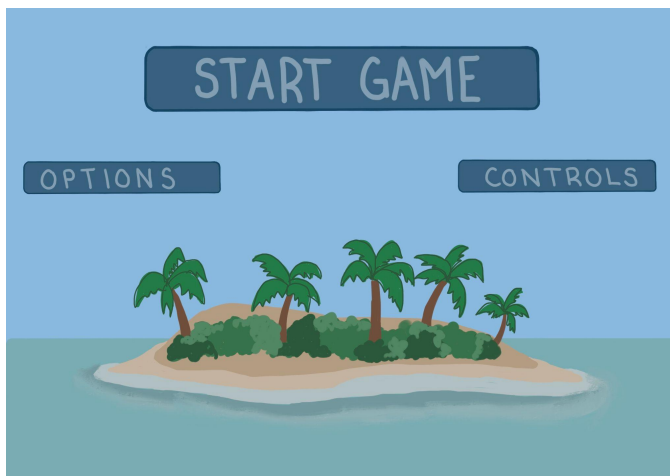


Figure 3: Concept for the main menu screen



Figure 4: An example of where the player can choose a card when they come across a chest

TOOLS

As elements use pixel art, the sprite generation tool *Piskel* provided as a resource under the course website will be used; no other libraries/tools have been selected.

TEAM MANAGEMENT

- Having a virtual office to work together on *Gather Town* for better virtual interaction
- Setting up a *Github* repository for code collaboration and version control
- *Trello* to assign tasks to individual team members as tickets in order to monitor progress

DEVELOPMENT PLAN

Milestone 1 - Skeletal Game

- **Week of January 23**
 - a. Define basic components and entities (e.g. player's character, enemies, Bosses, etc.) according to Entity-Component-System design pattern
 - b. Create common sprite assets (e.g. chests and tiles used for the map)
 - c. Implement basic character movement (i.e. input is determined by WASD keys)
 - d. Set up a static tilemap for one biome of the island
- **Week of January 30**
 - a. Include basic enemies with pre-defined movement and simple player detection
 - b. Implement basic collision detection (i.e. player's character does not extend beyond boundaries of biome or intersect with objects such as chests)

Milestone 2 - Minimal Playability

- **Week of February 6**
 - a. Create sprite assets for cards, enemies and Bosses
- **Week of February 13**
 - a. Non Applicable (development halted due to Assignment 1 and midterm exams)
- **Week of February 20**
 - a. Implement a starter biome that acts as world hub
 - b. Implement maze generation for when the player collides with an enemy
 - c. Begin designing system to generate cards, along with assigning attack strength and health
 - d. Introduce ability to acquire cards from chests
 - e. Add basic audio feedback (e.g. sounds for opening chests, acquiring cards, etc.)
 - f. Handle sprite sheets to support animations
 - g. Add character pathfinding (i.e. player can move character by clicking on the map)
 - h. Create a basic set of instructions that can be brought up during gameplay
 - i. Conduct user and stability testing

Milestone 3 - Playability

- **Week of February 27**
 - a. Set up a scrolling tilemap and enemies/Boss for each biome of the island
- **Week of March 6**
 - a. Begin designing card battle system
 - b. Finalize enemy/Boss AI during card battles
- **Week of March 13**
 - a. Implement saving of game state and reloading saved game
 - b. Finalize visual layout of card battle system
 - c. Create a basic main menu screen
 - d. Conduct user and stability testing, along with bug fixes

Milestone 4 - Final Game

- **Week of March 20**
 - a. Add background music (potentially different according to the current biome the player is in)
 - b. Finalize saving of game state and reloading saved game
 - c. Implement card statuses/abilities for more interesting gameplay
 - d. Begin creating animations for card battles (i.e. animations that represent a card's attack)
- **Week of March 27**
 - a. Finalize animations and assets, and provide fixes for any bugs
 - b. Include informative popups when the player is introduced to a new game mechanic
 - c. Finalize scrolling tilemap and enemies/Boss for all biomes of the island
 - d. Finalize inventory for the player to manage their card deck
- **Week of April 3**
 - a. Finalize character pathfinding
 - b. Perform optimizations based on additional user feedback