

UNIVERSITY OF WATERLOO

Faculty of Mathematics

Project Title

AWAKE

Team Member

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GitHub Link

<https://github.com/ErastoRuuuuuush/CS446.git>

1.0 What is our project?

Our project is a roguelike deck-building card game. Our game is set in a different world aside from real life, allowing players to build their own village. The game tasks players to gain resources from adventures in the dungeon. Defeat is very often and normal; however, anything collected during the last play will make players stronger in the next adventure.

2.0 Why is it interesting?

The game combines development and adventure. The development system can attract players to invest more time in the game. Intense combats require players to use strategies to construct effective card decks. Players who are interested in Strategy and Tactical games will fall in love with our game. Moreover, as a roguelike game, the content of it is highly randomized. The randomized nature allows for creativity and can provide players with a feeling of exploring.

3.0 Description of the project selection

We choose “roguelike” as our game genre. Players can interact with a highly randomized environment, which avoids repetitive experiences and can provide them with a long-lasting feeling of excitement and refreshes. The various combinations of elements in-game can satisfy their desire for exploration. We decided to use cards as the game display platform as it has low requirements in graphic design but does not lose the level of entertainment. In addition, we merge ideas of build game with card game, which is rare as a game genre. This choice also satisfies the difficulty level in development team of 6. The game requires graphic design for cards, buildings, backgrounds and UI, the implementation of numerous combinations of randomized elements, together with the implementation of various game systems (e.g., village, dungeon, combat).

4.0 Why does this project make sense in a mobile form factor?

This project is well designed for mobile due to two reasons: Flexible Gameplay and Touch Interaction. Most mobile games are played in short fragments of time, and are frequently interrupted. The battle time is usually less than 5 minutes, which makes our game adapted to the mobile platform. Our game is based on cards, the touching ability of the phone lets it feel more like a real card game.

5.0 Functional properties

5.1 The game provides a main view of the village which serves as headquarters.

- The main view provides a way to display the materials, items, buildings, gold, and abilities that belong to the player.
- The main view allows the player to upgrade weapons, modify items, and manage the village, by consuming correspondent material.
- The main view displays the current level and conditions of the player.
- An index handbook is provided to display the collections and craft formulae of the ones that have been explored.

5.2 The game provides a map view of the “adventure”.

- The map view generates a map which contains certain events and battles, which are generated randomly to some extent.
- The map allows the player to traverse through it, collecting items and triggering events.
- The map displays the current condition of the player and the items/weapons that belong to the player.
- When a battle is triggered, the player can select the weapons and items that they want to use in the battle.

5.3 The game provides a battle view where they fight antagonists.

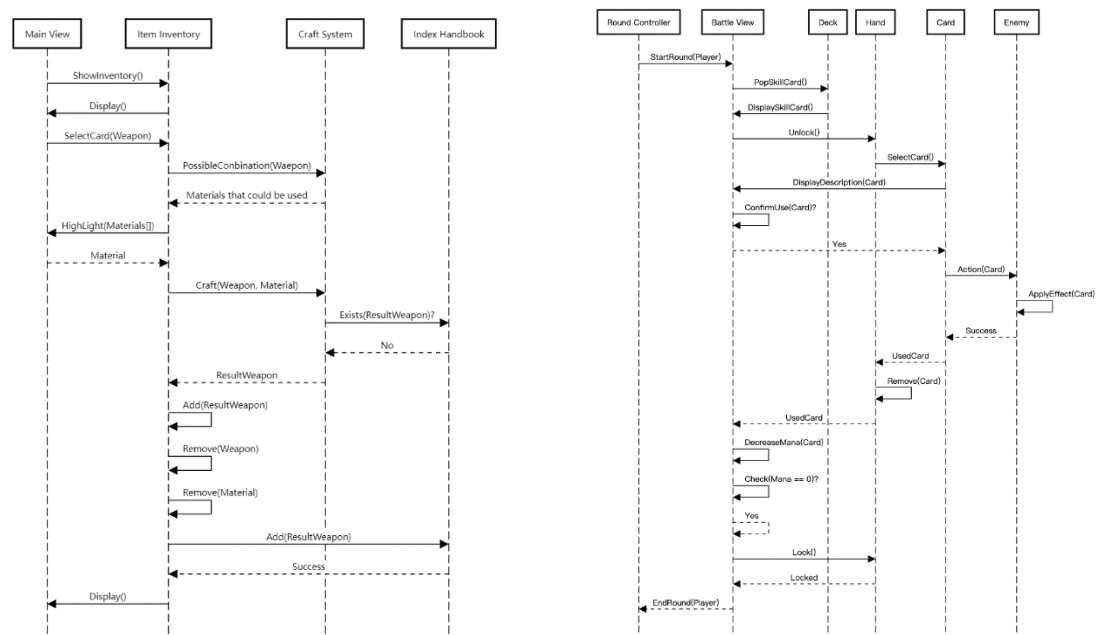
- The battle view generates the skill cards according to the items/weapons that the player chooses to use when the battle is triggered. The cards are stored in a deck.
- The antagonists are displayed with conditions associated with them.
- The battle switches between the player's rounds and the antagonists' rounds.
- The player can draw cards from the deck and use them to fight the antagonists.
- The antagonists can use cards in their rounds.
- When a card is used, certain effects will be caused to the characters' condition according to the description of the card.
- The card deck will be regenerated if all cards are used up.
- One of the components wins the game if the health of its counterpart reaches zero or below.

6.0 User scenarios

1. If the player wants to upgrade a weapon, they will start in the main view. Firstly, they need to click on the “item” button, and the item inventory will be displayed. The user can select the weapon that they want to upgrade. The crafting system will search for all possible materials and items that could be used for this weapon, and the cards representing them will be highlighted. After all, materials are selected and confirmed

to be used, the result card will be generated by the craft formula, and then added to the collection. The item (weapon) inventory will also be updated to contain this new weapon, and the materials that are used in this craft will be removed.

2. In the battle view, when a round for the player starts, the round controller will switch to the player. The topmost skill card from the deck will be drawn (transferred to the player's hand). The hand will then be unlocked. When a player clicks a card (sword blow) in their hand, the description of the card will be displayed (deals 10 damage, costs 1 mana). If the player confirms using this card, an attack of 10 points will be made to the antagonist. The antagonist's health decreases accordingly, sending back a message that this attack is successful. The card would then be removed from the player's hand, and the player's mana is decreased by 1. A check is made about the mana, which turns out to have reached 0. The hand of the player will be locked, not allowing any action on their part, then the round controller will switch to the antagonist.



7.0 Non-functional properties

7.1 Robustness

The system autosaves the progress each time when the map changes or every 5 minutes within the same map.

7.2 Accessibility

The game control is easy and intuitive. Players should spend fewer than 10 minutes knowing how to use all systems in the game.

7.3 Reliability

The game data (money, level, materials, weapons, etc.) are correctly saved. The changes in data are recorded in 1 second.

7.4 Privacy

User information will not be automatically collected by the system, users have the right to choose whether to share their game data or not.

8.0 Human values

8.1 Truth

Quest for knowledge: the main view with a crafting/collection system encourages the players to unlock new materials for new buildings. For a better gaming experience, players will have to try out new crafting formula.

Determination: players are encouraged keep exploring the dungeon, even with the death penalty. Rewards, the progression of the story, or even the desire to unlock new items will push the player to keep taking risks and going into the dungeon.

8.2 Right Conduct

Players are encouraged to maximize the output of the village system in a limited area. The players also need to find a balance between supplies and space in the bag. These properties will train the players to make better decisions.

9.0 Stakeholders

Game designers: Design the game, make sure the game is attractive to players.

Developers : Develop and deliver the project, make sure the project is maintainable.

Players: The game should be fun to play, following the given rules.

10.0 Which population of users will use this system?

- People who enjoy games tagged with Deckbuilding, Strategy, Exploration, and Roguelike.
- People who love card collections.
- People who prefer using mobile devices and like the feeling of screen touching.
- People who would like to gain relaxation and happiness from games in their spare time or when they feel bored.
- People who want to do some non-time-consuming thing with fragmented time.

