

Unnamed Card Game

Aim

For this project, I aim to use **C++** within **Visual Studio** to create the bulk of the project. I have wanted to create a card game for a while and this seemed like a good opportunity. I intend to make a slight mix between **a card game with deck-building elements** following that main style of gameplay, as well as, an RPG (Role Playing Game) style of **turn-based combat** (see Game Mechanics for more info).

This game will hopefully allow for me to gain proper **practice with XML**, saving and loading techniques from files. As well I plan to use **TGUI** for all of **the user interface elements**, I have had a fair amount of practice using this library and it should help expedite the visual elements of the game, not to mention it **interfaces perfectly with SFML**.

Overview

The card game is turn-based wherein **two players** will take turns to **try to reduce their opponent's health to 0**. The game will be played on **a simple board with three spaces for creatures** (Cards). Each card will have **between 1 and 3 abilities**. One to two basic attacks and a unique ability. All of the abilities on **the cards will have two important values** associated with them, **speed and attack** value; the speed will determine the order of attacks during combat resolution the other is how much health the target will lose if the ability hits a creature.

Both players will **start the game with a full board of creatures** (their Frontline) and a **small reserve** of three creature slots. The **players will try to defeat all of their opponent's creatures** to win that round. **The first person to win Two rounds of play will win the game**. However, in **between rounds** both of the **players have the option to swap out the creatures in their Frontline with those creatures in their reserve**.

During the main gameplay, there will be **three main phases/stages**:

- Phase 1: **Preparation. Fight or Flee**, the players choose if they want to **continue fighting** this round or **concede it to their opponent**.
- Phase 2: **Combat Prep**. Each player will take turns selecting the actions of each of their creatures and the targets of those actions.
- Phase 3: **Combat Resolution**. The selected actions will trigger in turn depending upon the Initiative/Speed of said action.

There will be **a rudimentary AI** (Artificial Intelligence) for the game in terms of **a practice mode**, but the **main gameplay will be between two players**. This will allow for the **learning of SFML sockets** and getting a better grasp of networking within C++.

Game Mechanics

Deck Building.

The player will have a **collection of cards in which to build a deck around**. There are **two portions to the player's deck** the first the **Frontline**, this is **what will start on the game board** when the game first begins, they will have to **follow the board limitations (3 Spaces)** as well as **following the cards own limitations (Size Guidelines)**. Additionally, the player has access to a **Reserve pile**, which can **only be accessed during the round transition**; it allows for players to **swap out their creatures between rounds** while still **keeping their current damage values**.

Loading/Saving to Files.

Due to the addition of the **Deck Building** and the **Collection of Cards**, I will need a method of loading the player's choices, therefore I will need some careful consideration for how this could be done. **I plan to use XML** it is a well-documented technique of saving files and if I can learn how it works it will **allow for easier loading and saving** features in the future.

Networking Between Two Players.

The network should be a **peer to peer system** where **one player will host the game and the others will join**. This sounds like a simple system and once connected the players will take turns to it should be simple to have **one player waiting while the other player is sending the messages** for their turns; this should work but more information will be needed about the inner workings of SFML sockets.

Game Board.

The aim for the game boards is to **limit the number of max creatures** on the board to three. It will be a **simple 3x2 rectangle board** which will have all of the creatures facing their owner. The cards will have a size category, Small, Medium, Large and Huge. All creatures **medium and smaller will occupy a single space**, creatures of **large size will require two spaces** and all **Huge or bigger will require all three spaces**.

Game Rounds

The game will consist of **between Two to Three rounds** (a best of three where at the end the player with two round victories will win the game), wherein the **players will use their creatures to try to defeat their opponent's creatures**. Between each round, both players have the option to **swap out their current party** of creatures.

Three Phase Turns.

- **Phase One;** This will **give the player a choice**, the first to **Fight** the other player's current board, this would then **allow for phases 2 and 3 to follow**, the other is to **Flee**, this will **end the current round** of the game giving the **opponent a win** (1 out of 2 wins required).
- **Phase Two;** This will require the **player to select an action for each of their creatures** using the **abilities written in the cards text area**. Each ability will have **two key values** a **Speed/Initiative**, this will determine **when the ability will trigger** during phase 3 and an **Attack** value the **damage the ability will do** if it hits the target.
- **Phase Three;** This is the **combat resolution** this is when the creatures will **take their turn to perform their ability**. It will work as a list using the speed of the ability to number each of the abilities in order and will navigate the list triggering each ability in turn.

Round Transition.

Between the rounds, the **players will have the option to either continue with their current frontline** or to **swap out any or all of their current creatures in their reserve**, while still both **following the board and card limitations**. This will allow for a **simple catch up mechanic** if a player lost the first round they have the opportunity to win the second round their opponent enough to win. With three rounds all to play for.

Card Design.

The cards will be the **main part of the game**; the cards will **have a name** (What the card is called), **the card's size** (Small, Medium, Large and Huge) the size of the card will determine **the number of spaces it will take upon the game board**. The cards will have a **classification**, it will **allow for future interactions with other cards of the same classification** (A classification could be human, monster, ext.) The cards will have **up to three abilities written on the base of the card**, there will be **at least one Combat (Attacking) ability** and **one Unique (Special effect) ability**, the abilities will have **two key values associated with them**; a **speed** and **attack value**, the speed will be used to assign the list of actions **an order for when they will trigger**. The attack value will be used to **damage the enemy target**.

Win/Lose Condition.

The simple **win condition is to win two rounds before your opponent**; This can be done by either **destroying all of the opponent's creatures** in that round or by **having them concede that round**.

Gameplay Flow Chart

