

Lab 5. Card game. Team 2 (Yasmeen, Yvette)

General game idea:

Each player will start with 25 cards, and during the game, players will be drawing, playing cards, and attacking until one player wins by reducing the opponent's HP (Health Points) to 0.

We will:

- use **GUI** for card selection, card play, and tracking player stats such as HP, resources and units.
- use **linked lists** to implement each player's deck of cards
- apply the concepts of **polymorphism** and **inheritance** as follows: there will be UnitCard and SpellCard classes, each with a different number of arguments, and they will both inherit from the base Card class.

There will be a game log to keep track of all major actions and will give feedback through a popup window.

Cards: Every card has a resource cost. Players start with 3 resources and gain an additional resource each turn.

You can only play the cards your resources allow. When you play a card, it will either be:

A Unit Card: when played, unit cards go to your field and can attack on subsequent turns.

A Spell Card: Instant effect cards that can either deal damage or heal, and then are discarded after use.

Player Turn:

At the start of your turn, you draw a card from your deck.

You can play a card from your hand if you have enough resources. If you don't have enough resources, you won't be able to play the card, and you will see a "Not enough resources" message.

You can attack your opponent if you have sufficient units.

The opponent can defend themselves from an attack if they have sufficient units.

Resources:

Resources start at 3 and increase by 1 each turn.

Who wins:

You win the game if you reduce your opponent's HP to 0 through attacks with Unit Cards or damage from Spell Cards.

Here is a quick "draft" of what the GUI part will look like (not well thought out yet but just to give an idea):

