Project Proposal: Card Game

Game Name: "Card Coffin"

Project description:

        Card Coffin is a two-player competitive deck-building card game, where two players select their deck of cards from a roster of available cards, and then battle each others cards to determine a winner. Cards are based off of the traditional deck of 52 playing cards. Each player has a field of slots which they can play cards onto. At the start of each turn, players draw cards from their draw piles until they each have 5 cards in their hands. Then, players simultaneously place cards into slots face down. Cards are then revealed, and cards have their values subtracted from the card directly opposing them. Cards can be combined, with their values being added into one larger value. If a card has its value reach zero or lower, the card is discarded into the respective owner's discard pile, aka the "coffin." Face cards serve as special cards that allow the player to perform special actions, ex. a "Jack" card would allow the player to draw from the opponent's discard pile instead. A player loses when their "coffin" has a set amount of cards inside of it, ex. 20 cards. The strategy of the game is to maximize the number of cards in the opponent's coffin while minimizing the number of cards in one's own coffin. Images depicting an approximation of the playing field and simulating player turns have been included for clarity.

        The project will be completed using the latest version of Godot, as well as the C++ and C programming languages for efficiency. SQL may also be used for checking an internal database of cards.

Technologies: Godot, C++, C, SQL

Overall Goals:

- Create a reliable, comprehensive ruleset for the game
- Create a stable game interface
- Create online functionality for remote games between players
- Create leaderboards (local, friends list, global)
- Stretch goal: online matchmaking
- Stretch goal: browser-based interface

Systems:

- User GUI
  - Supports multiple accounts
- Database of cards
  - Stores all possible cards, based on version of game client
- Client-server (or peer-to-peer) unit
  - Connects users for online matches
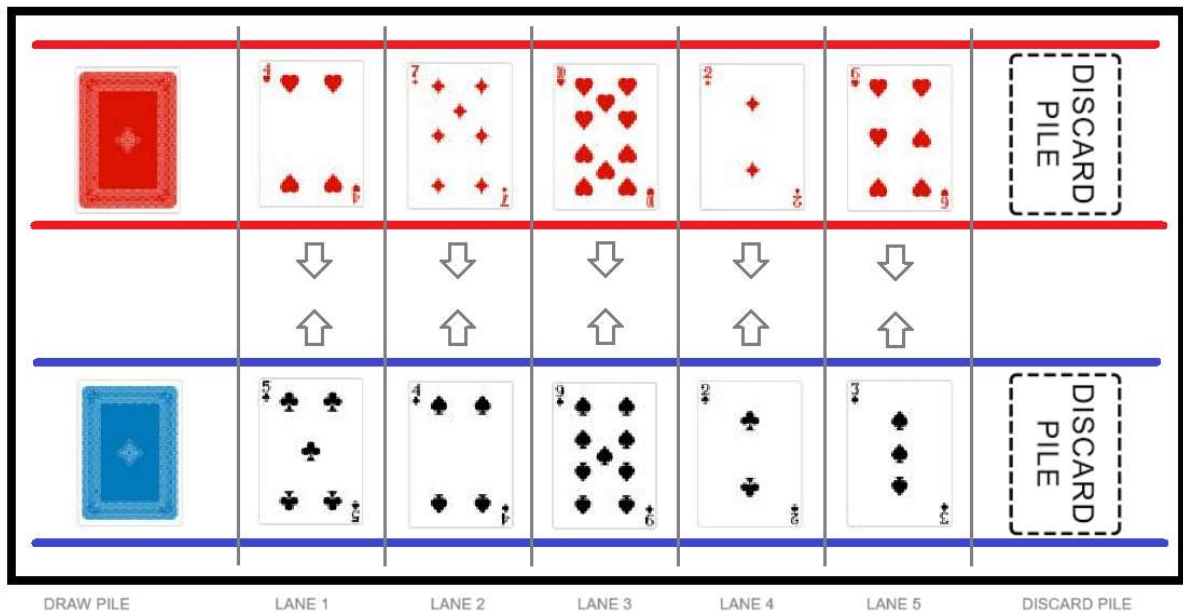
Fig 1. Example of playing field

As demonstrated above, there are five "slots" for each player to place a card in, and each slot corresponds to a "lane." The card in a given lane must "attack" the opposing card in the same lane.

Examples of "special card" actions:

- King – draw from your own discard pile.
- Queen – discard your next defeated card to the bottom of your draw pile.
- Jack – draw from your opponent's discard pile.
- Ace – a special card. Normally worth 1 attack score, but is worth 10 when combined with another card.