Australian National University

COMP1140 Assignment 2

Renier

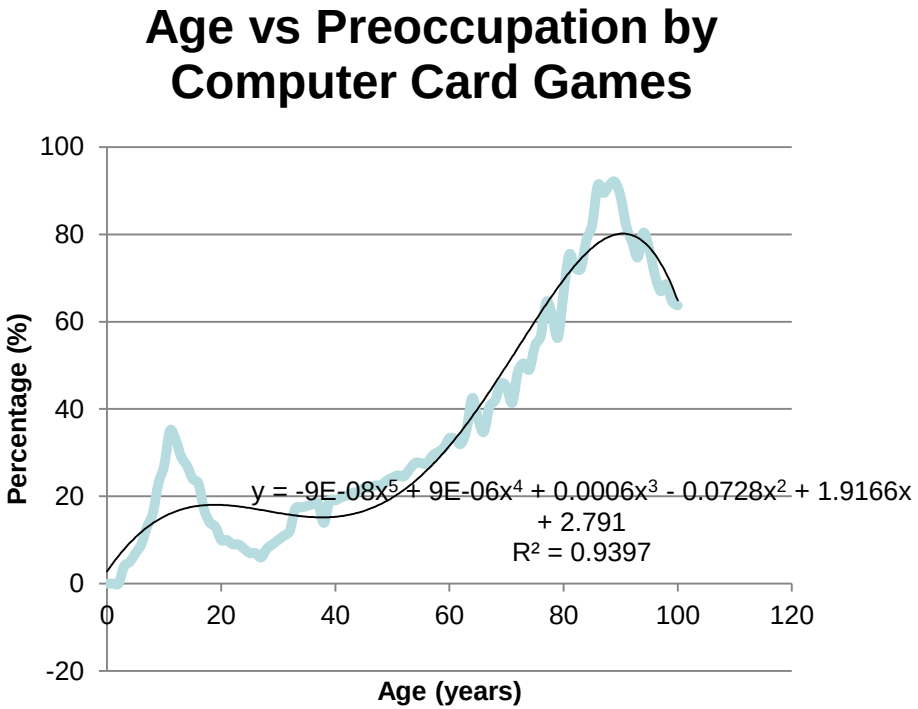
Thu14e

Design Philosophy

- We decided to perform a study on our potential players

Preliminary Analysis

- From analysis, we observe that older audience spend most leisure time on computer card games



Design Philosophy

- We decided to perform a study on our potential players
- From preliminary analysis, it is clear that card games target older audiences
- Thus, the game should be easy to play, conservative and less challenging.

BUT

HIGH STAKES

Renier

Max Wang (u5584091)
Felicity Lee (u5558958)
Fangqin Chen (u5552738)

The Problem.

- How could we make a boring old card game appeal to us?

The Key Elements

- To tackle this problem, we decided to consult the Google Play store.

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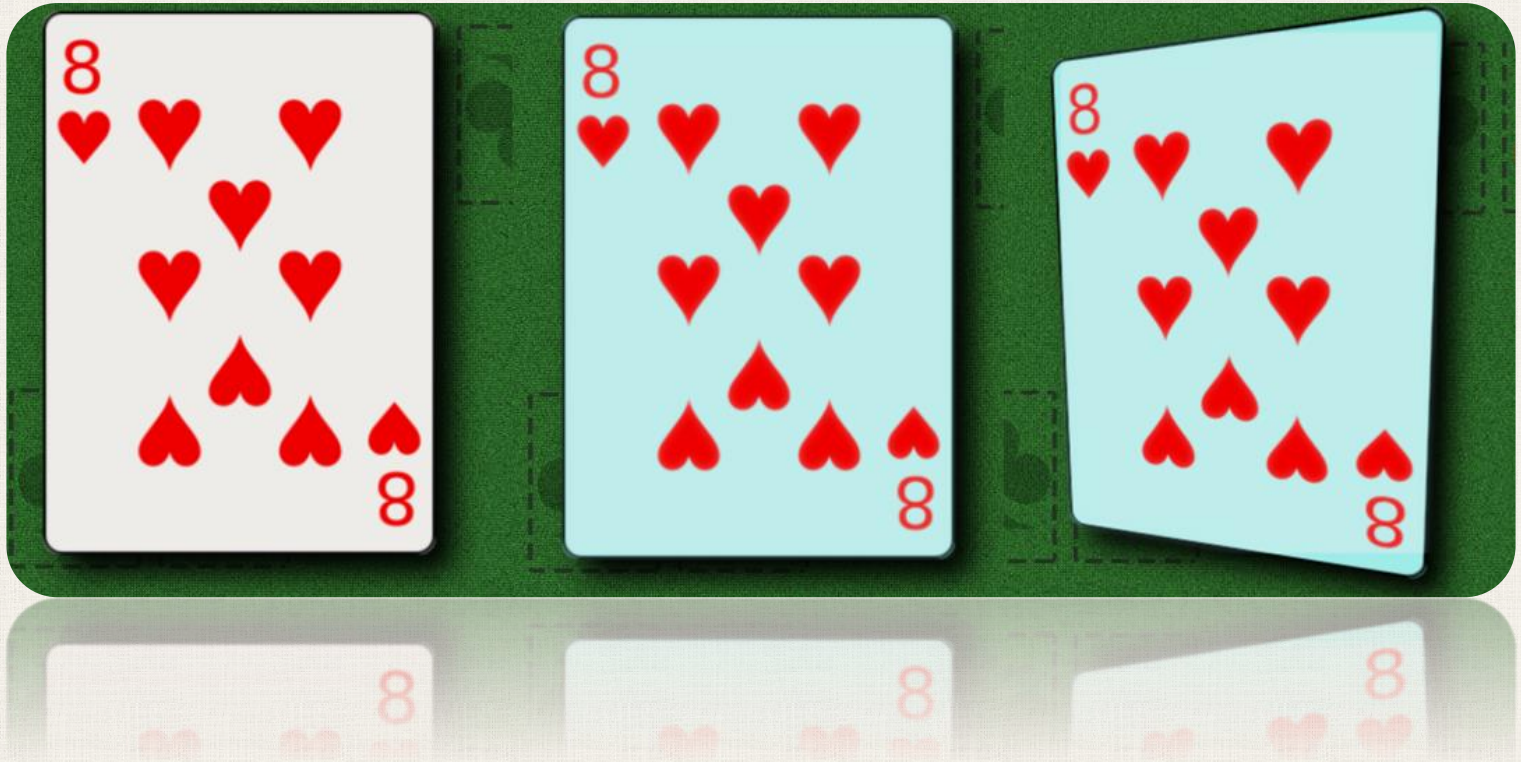
- To tackle this problem, we decided to consult the Google Play store.
- A common theme between all of the most popular applications were:
  - Aesthetics
  - Customizability
  - Competitivity

Aesthetics

- The visuals of our game was one of the main focuses.



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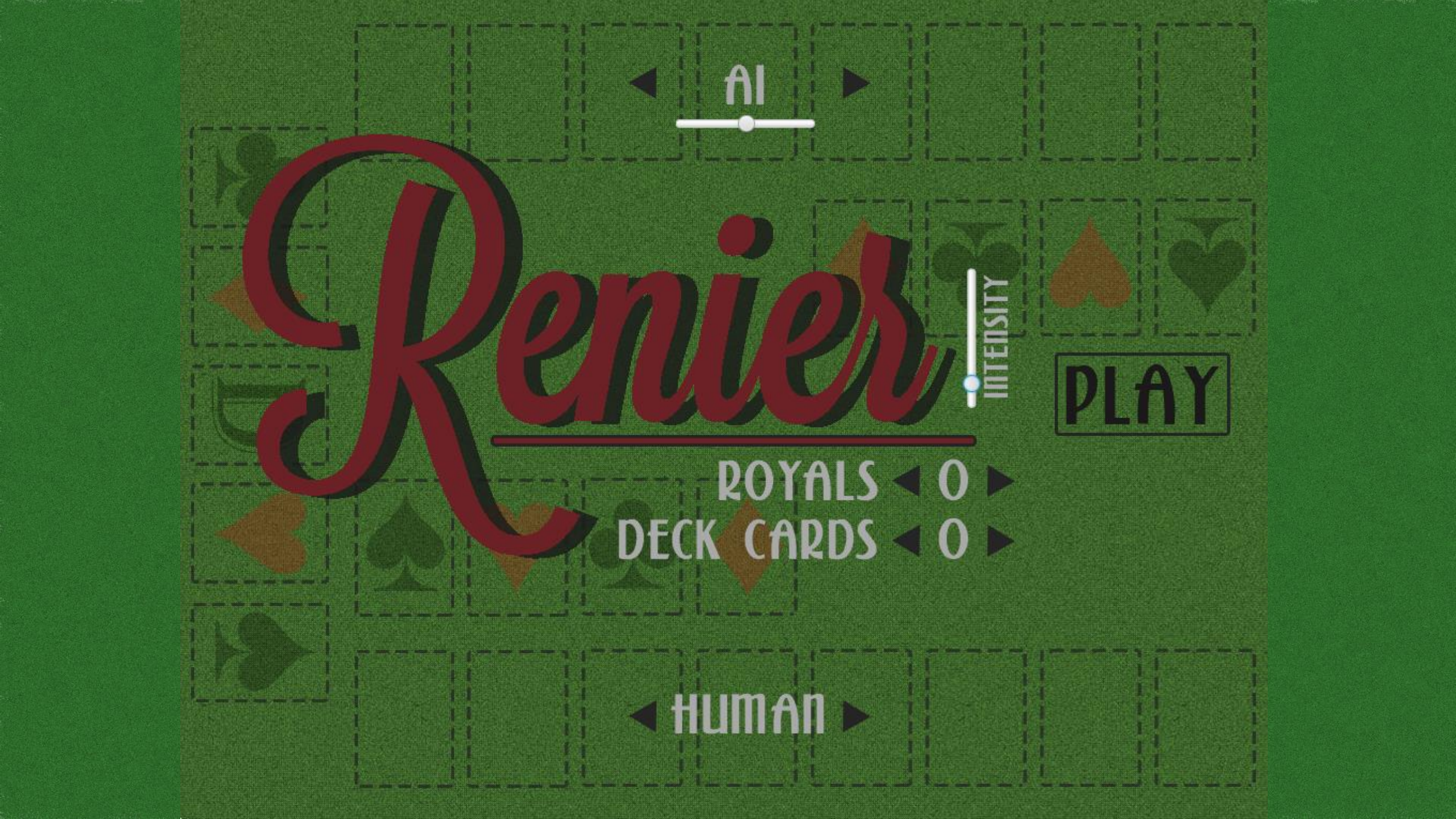
AI
Renier
INTENSITY
PLAY
ROYALS 0
DECK CARDS 0
HUMAN

Customizability

- A game that never changes is boring; nobody wants to play a game they can always win
- To do this, we needed a customizable difficulty.
- This was done through an opening screen which allowed for various settings of the game to be changed
- We added an Intensity slider to make the game more engaging.

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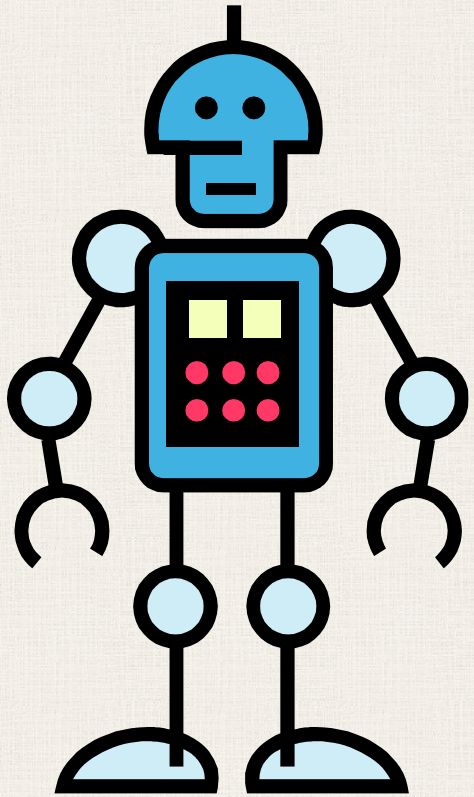
- A key component to any game is competition
- A player wants to challenge their friends and family, and if they have none, themselves.
- Therefore, we had to create a decent AI that would provide this

Artificial Intelligence

- Our first implementation of AI was a simple heuristic.



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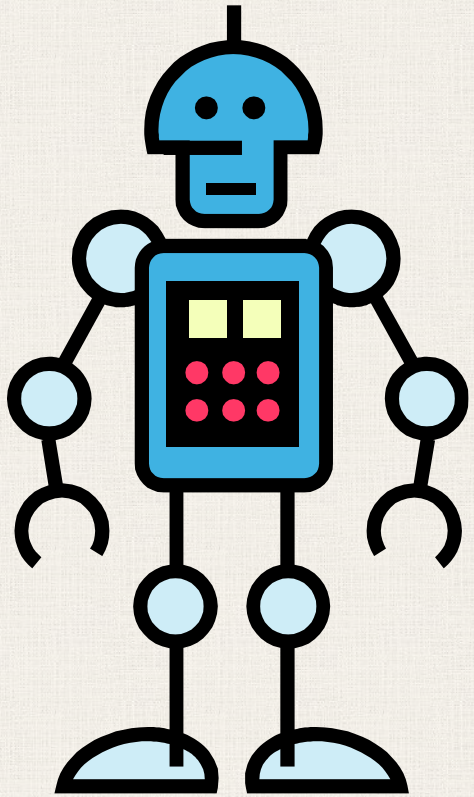

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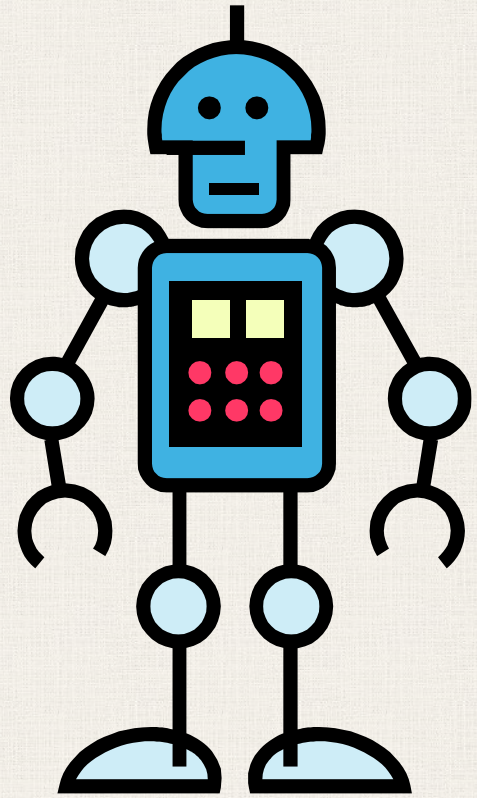
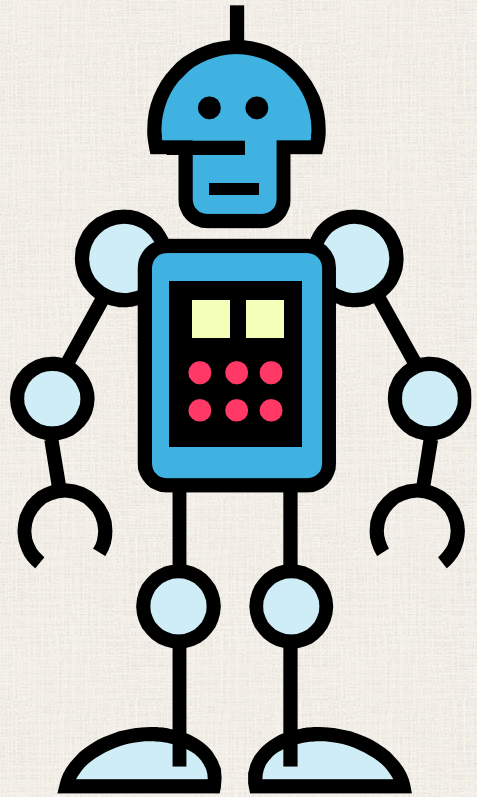


Artificial Intelligence

- Our first implementation of AI was a simple heuristic.
- Our next consideration was using a search tree, which we realised still had many limitations
- Finally, we settled on a basic implementation of Monte Carlo
- We realised that despite being better than a Search Tree, it was still sub-par.



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- Clearly, from the analysis of our research data, a game such as Renier was simply not good enough (to reach top app).
- We combined the features of a generic “Hearts” styled card game with a those of a retro styled arcade game.
- A lives system was added, to increase the difficulty.

So...

What was the outcome of these features?

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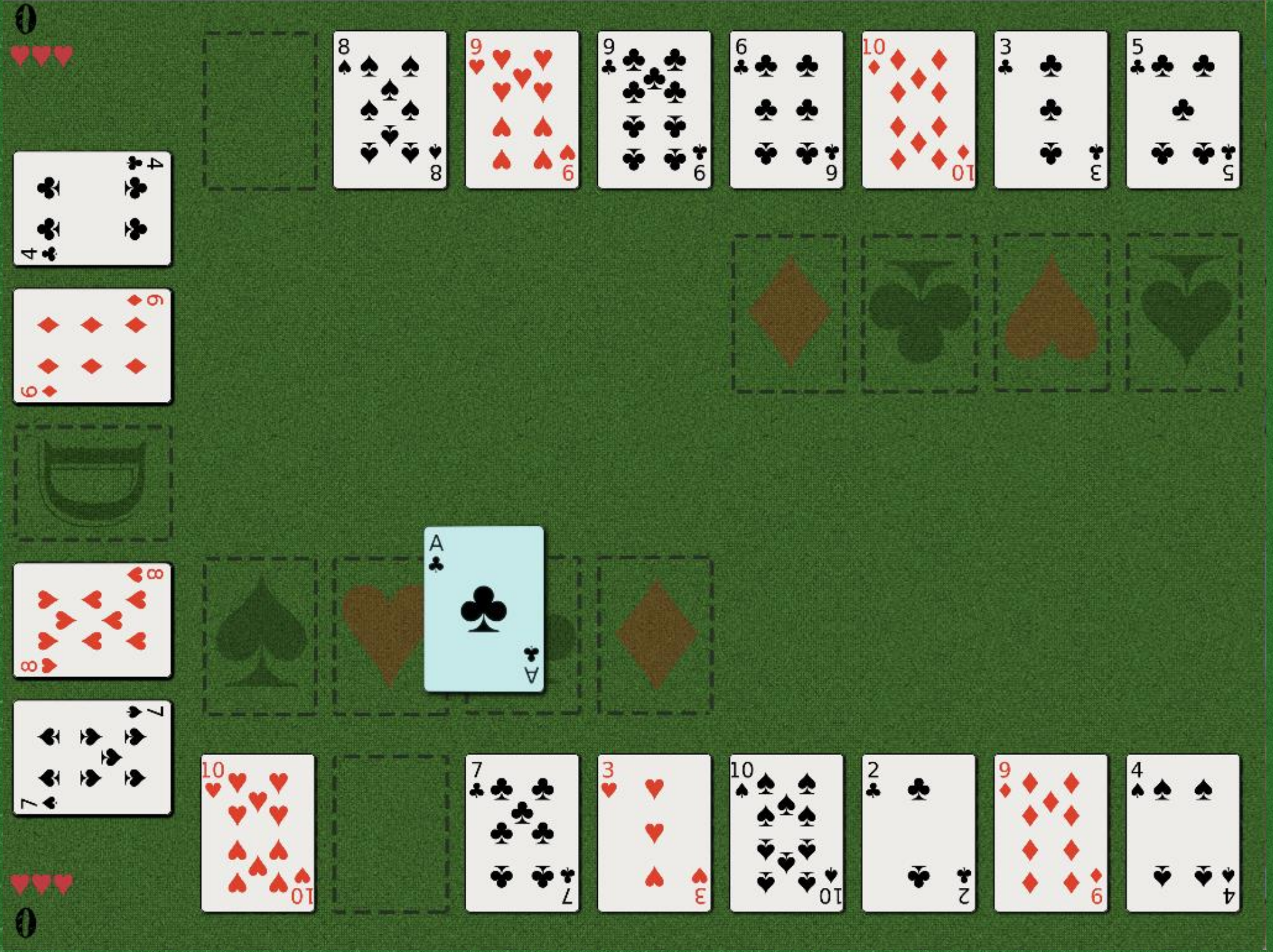

Animations make the game easier to learn.

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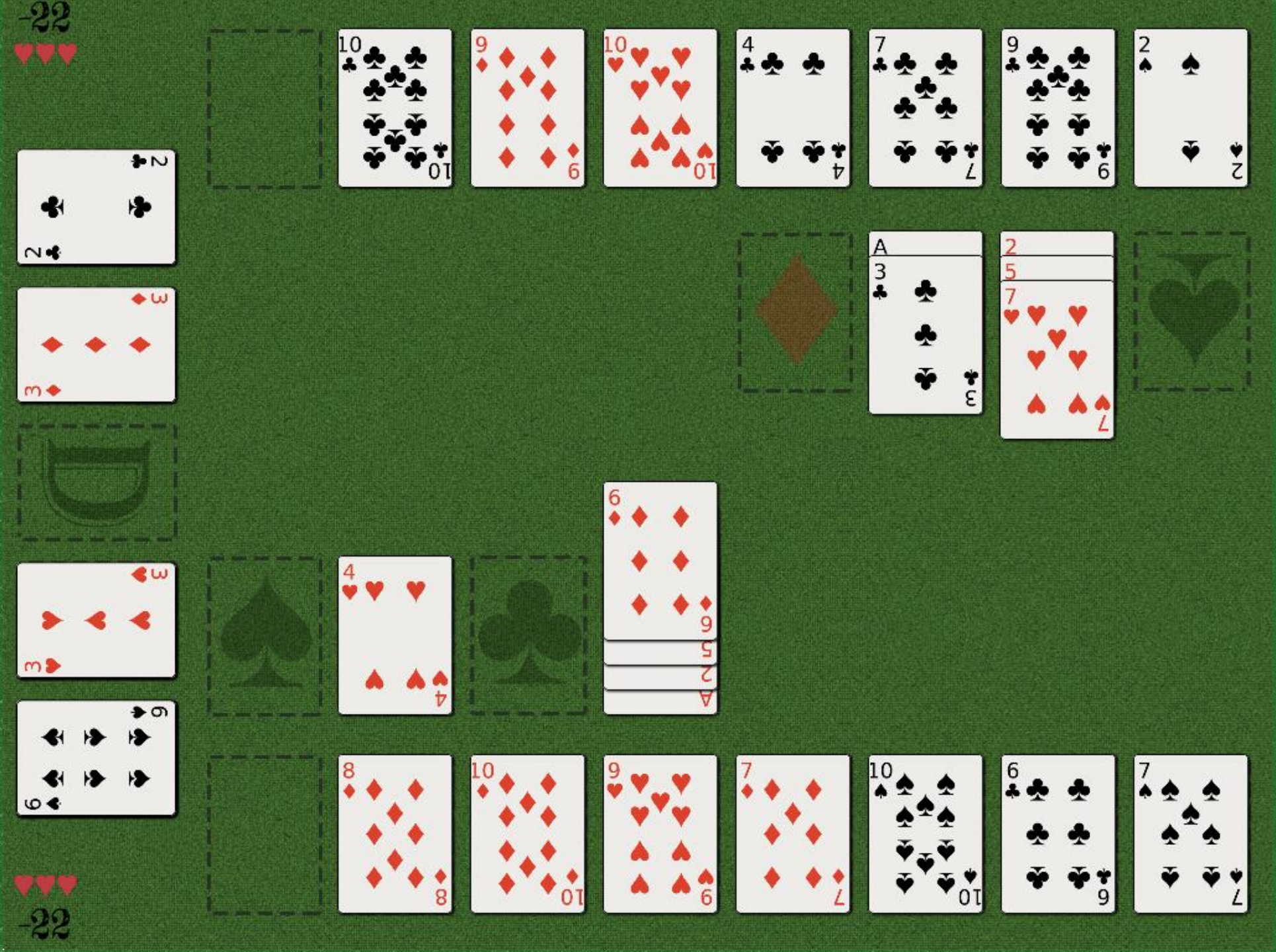

The UI is overall intuitive and easy to understand.

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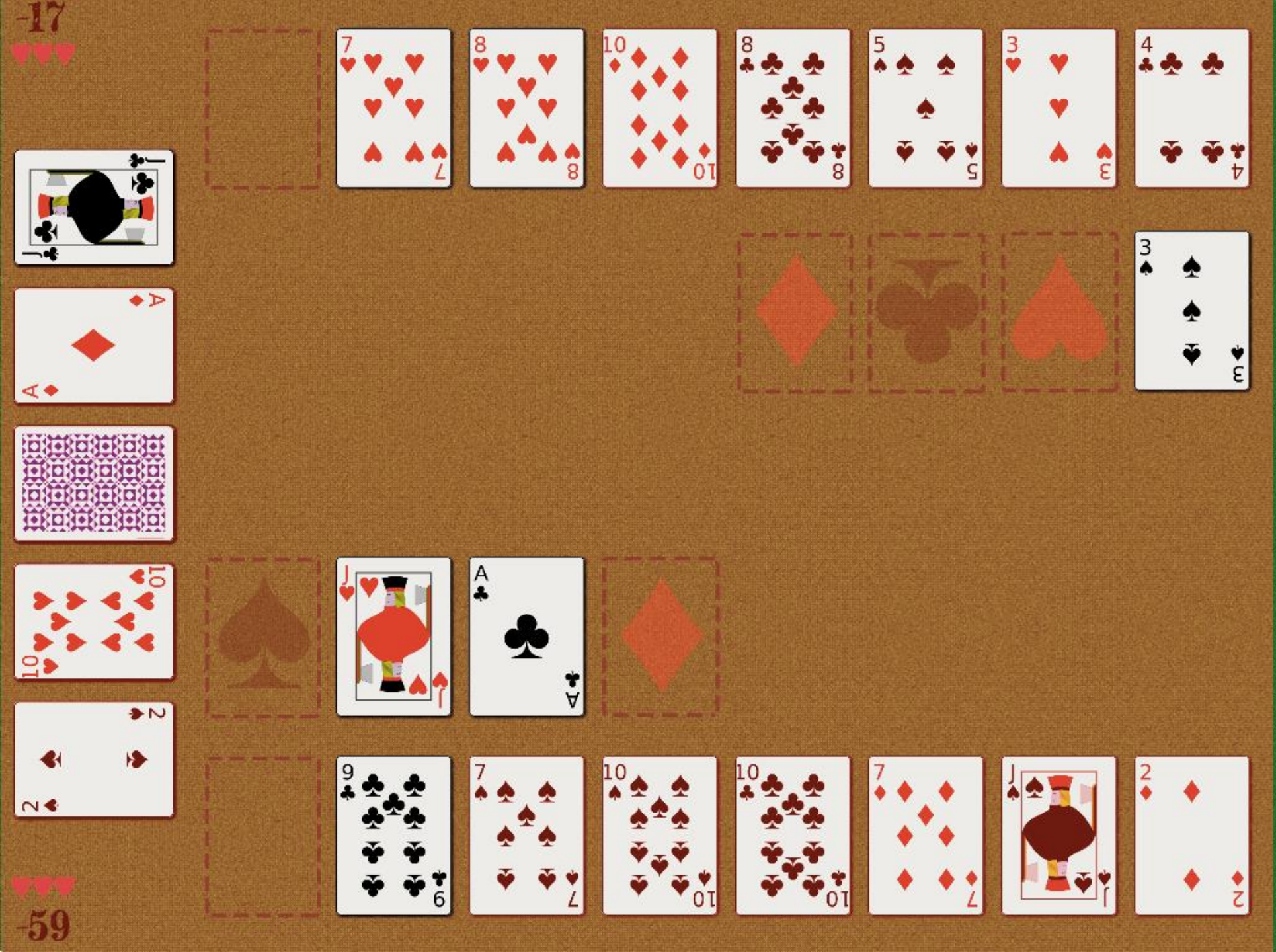

An intensity setting adds a time limit to each move.

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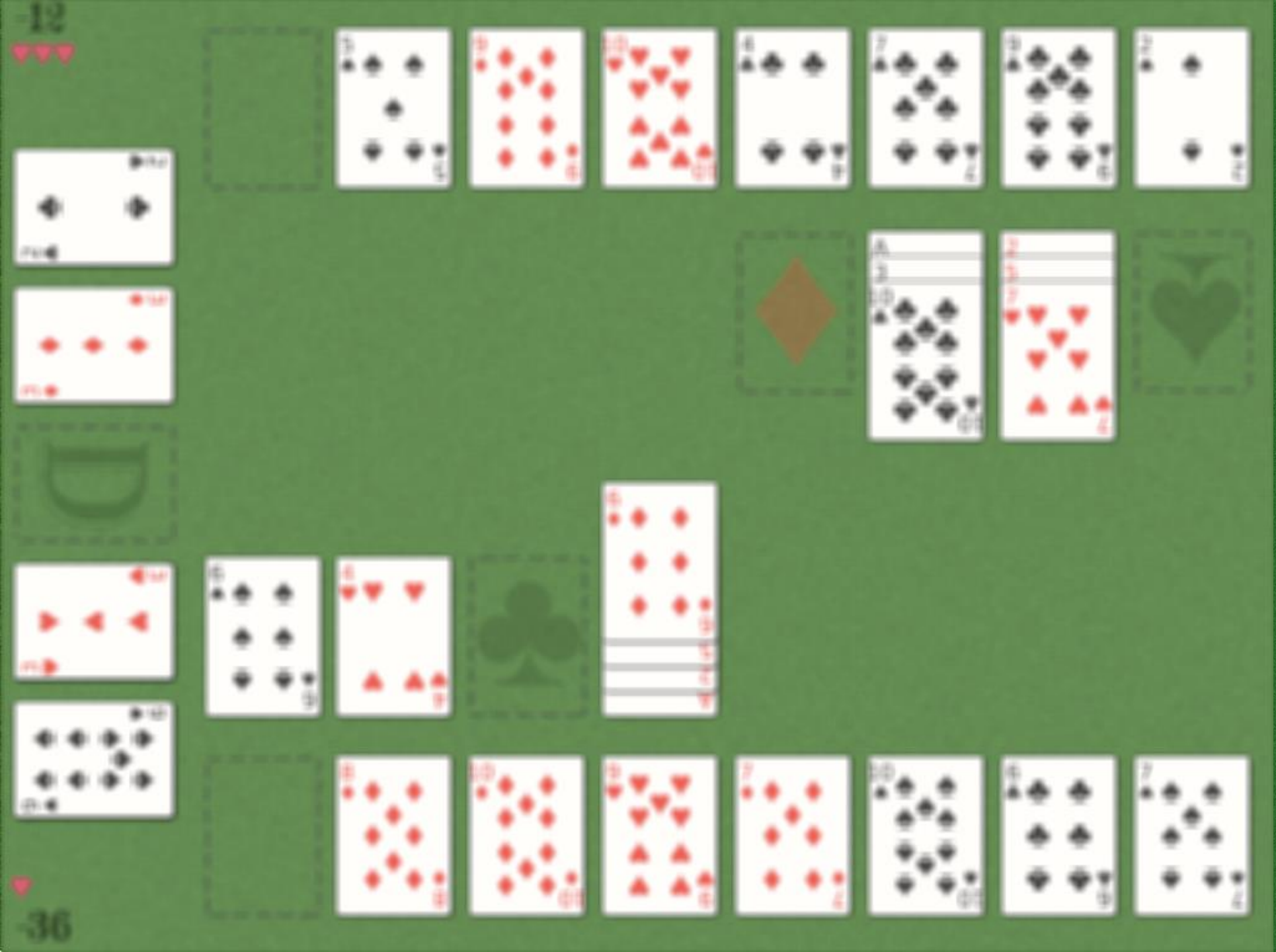

A blur effect punishes players for careless play, or taking too long to play.

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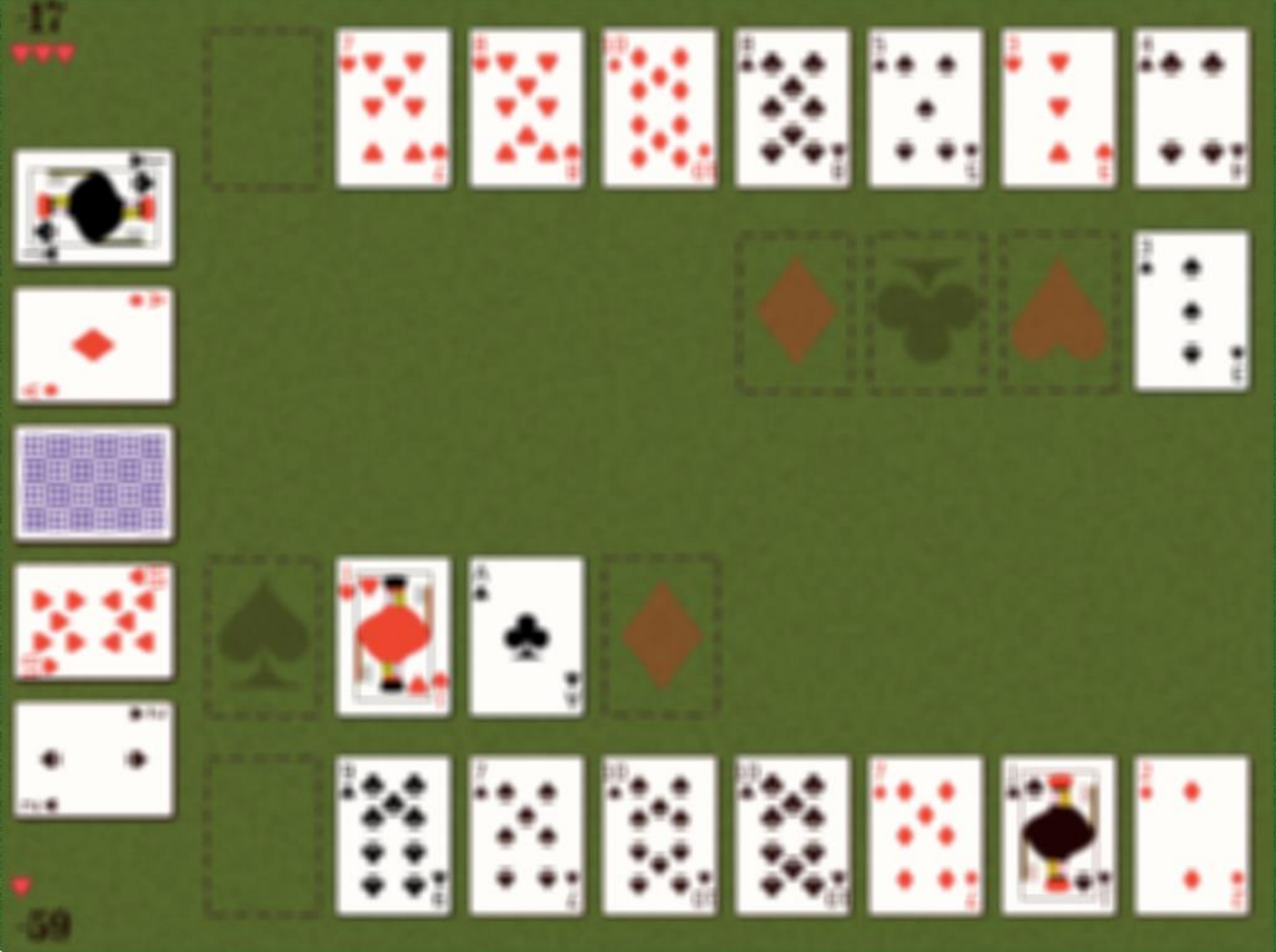

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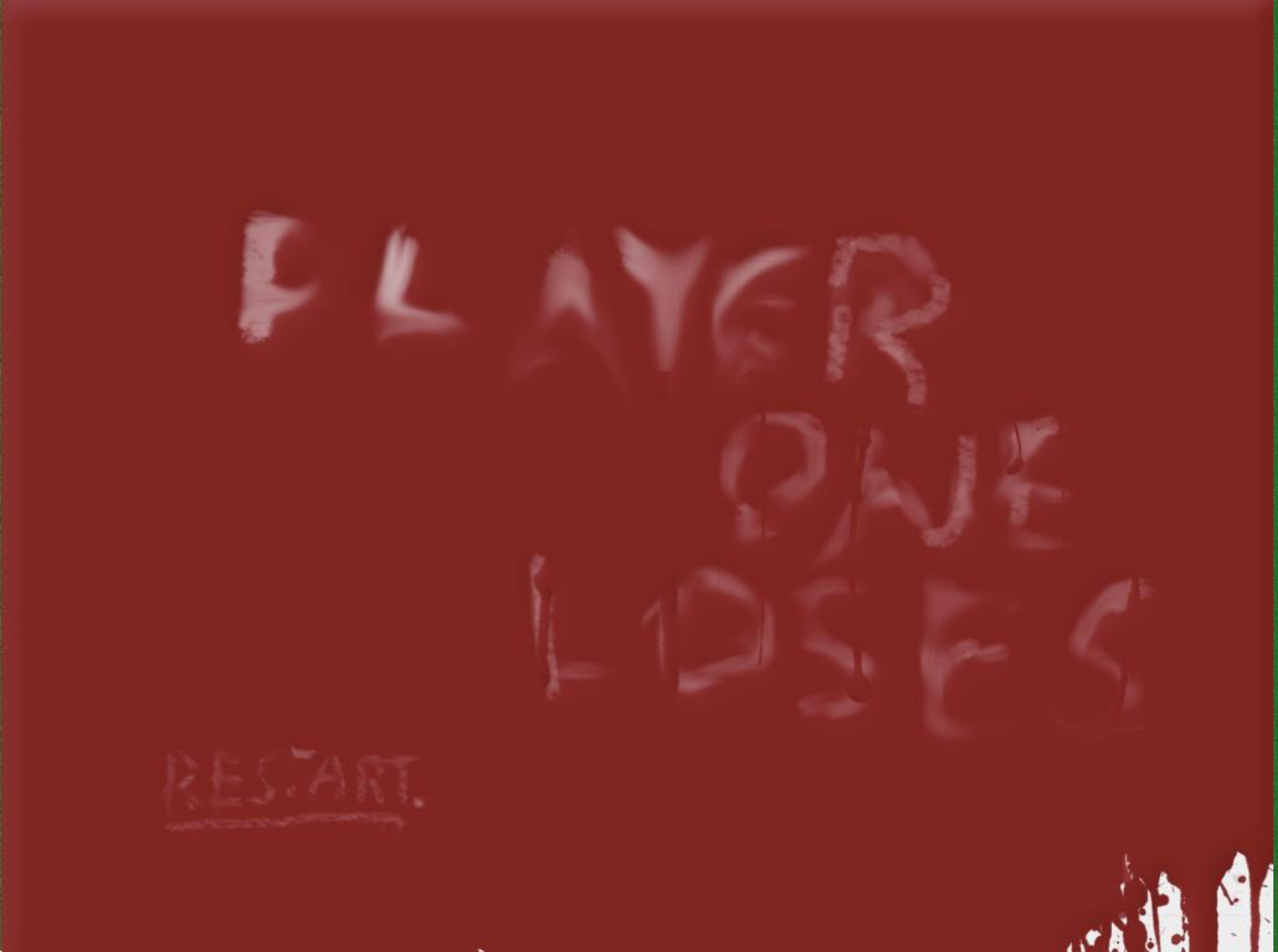

A simple end game screen only allows the player to restart, keeping them hooked.

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But enough with the Screenshots.
Let's get on with an actual demonstration.

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The implementation

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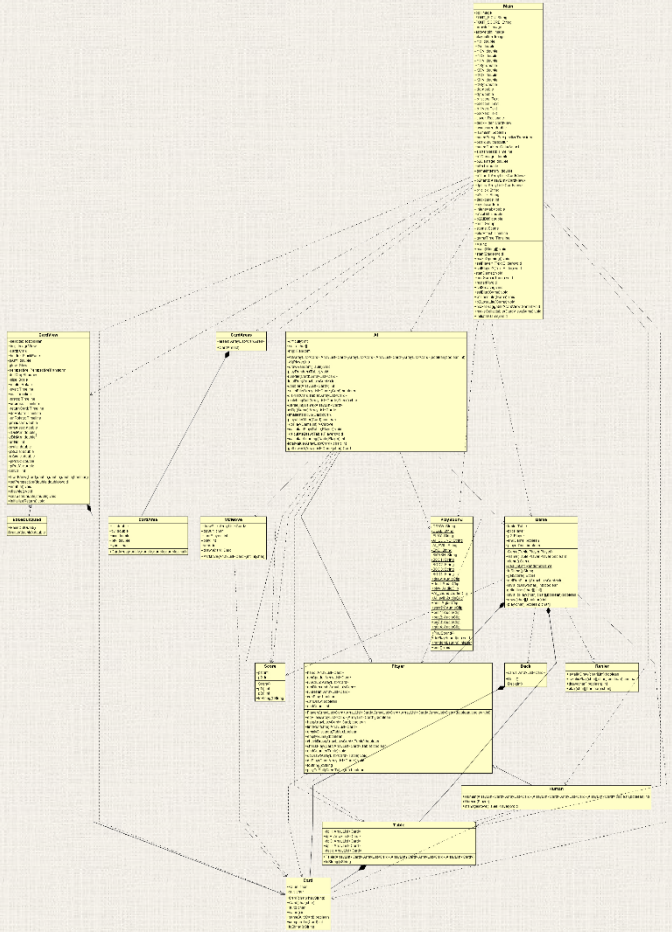

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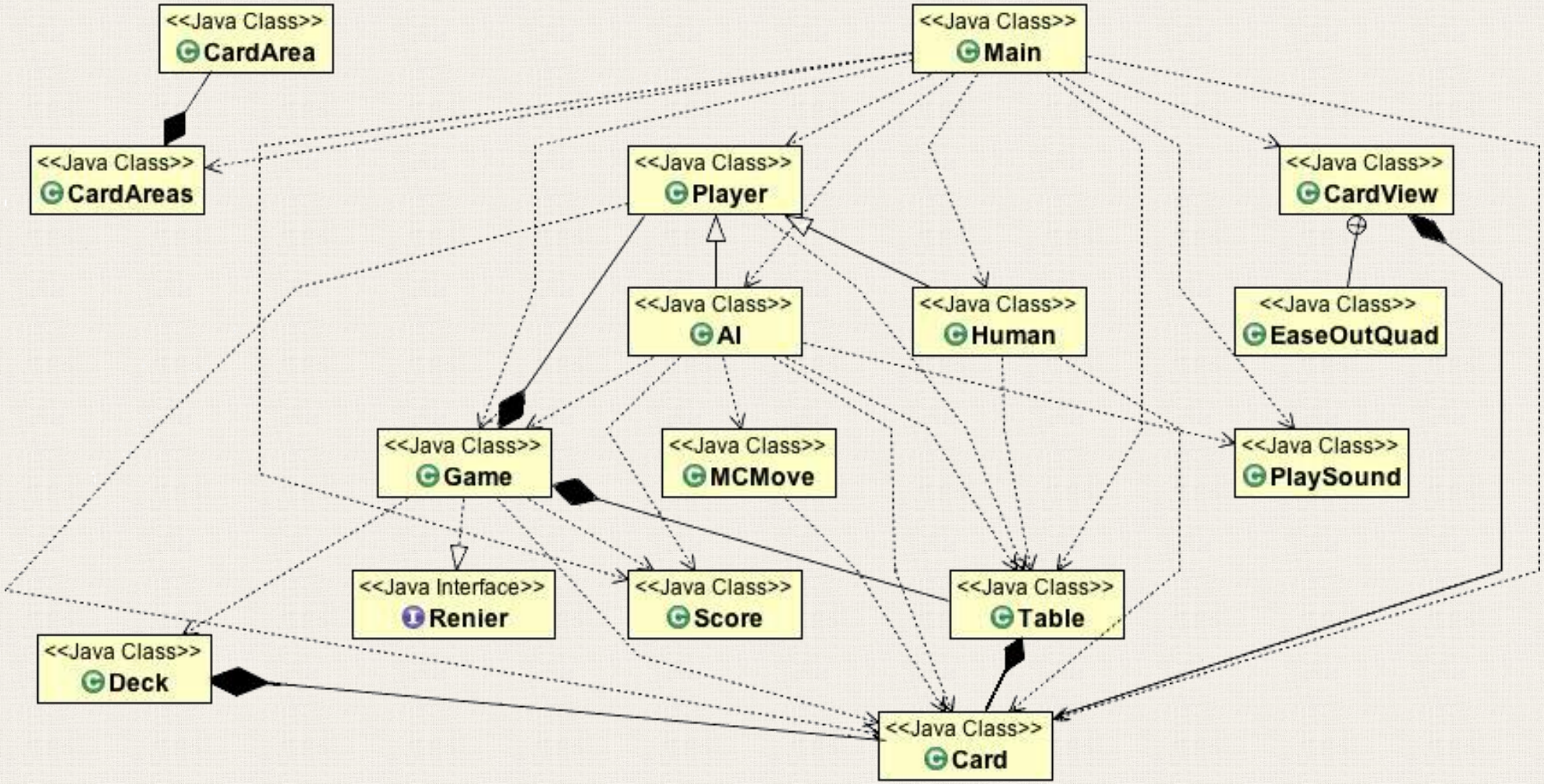

Testing

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- Some sections of the code – especially the JFX components were extremely hard to test rigorously, and had to be tested by observation.
  - We did, however, manage to test some key JFX components.

Questions?

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