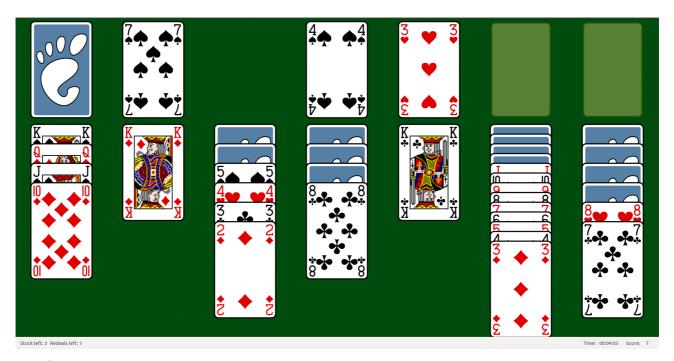# SOLITAIRE

Solitaire online game by Michael Bausano.

GitHub

How does Klondike work

Klondike is the most known of all solitaire card games. The goal is to sort all cards of the same suit on top right piles in ascending order. There are seven piles with a total of 28 cards in the beginning and a deck with 24 cards.

Authorization

There is Login link in the navigation menu. If the user is logged in, it redirects to user information page, where a user can logout or change his password. A guest gets redirected to a login & register page (see wireframe *wf_auth*).

Scoreboard

Upon clicking the Highscore link in the menu, a simple table sorted by number of points is printed. If a current user has a score in the **TOP 10**, the line is highlighted (see wireframe *wf_highscore*).
The score is based on the time that passes since the beginning of the game and the number of moves a player did.

Game

There are 13 piles I call **registers**. All registers extend *stack data type* class and are indexed (see wireframe *wf_game*). The player has an option to *start a new game* with a fresh deck of cards (reshuffled) or *reset* the current deck to its starting position.

Starting position

When the game starts, there are 24 cards in D[0] register. F and D[1] registers are empty. On each of P[0 - 6] registers, there are *x+1* cards and only the top one is revealed.
Available player actions:

- one in D[0] → D[1]
- ∀ in D[1] → D[0]
- { , } in P[x] ←→ P[y]
- one in D[1] → P[x], F[x]
- one in P[x] ←→ F[x]

The player's goal is to move the cards around the registers so that he manages to reveal all cards on the table. The game ends when all 52 cards are in F registers.

Timer

There is a timer running in the background for the first 10 minutes of the game (that is the time limit for a player to even score some points). The timer triggers each second, decreasing the players score by one and printing it out.

Move validation

There are two main validation methods when moving the cards:

canBePutOn

Serves to move cards on and around the P registers. The method checks if the value of top last card from to register is one higher than the first card in from array and if colour differs.

canBeFlushed

Serves to move cards on F registers. Both cards have to share colour and the moved card has to have value one higher.

Extras

There is a *comment section* on the high score page where registered users can add comments.

In the game you can ask for a *hint* by clicking Hint button. This will trigger an AJAX request on PHP script that is going to try giving you an advice.

For higher page usability a *confirmation box* is implemented in New game and Restart game buttons.

A *help page* includes the rules of Klondike and some brief history of Solitaire (see wireframe *wf_help*).

D_0 D_1 F_0 F_1 F_2 F_3

P_0 P_1 P_2 P_3 P_4 P_5 P_6

Score: 257   Rereads left: 2   Hint

This is a university project for course **CSD 2550**. Code and project description
are availaible at github.com/bausano/solitaire.

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wf_game

wf_auth

Solitaire   Highscore   Help   Login

Login

Your E-mail ...

Your Password ...

Login   Forgot your password?

Register

Your E-mail ...

Your Name ...

Your Password ...

Repeat Your Password ...

Register   You have to enter a valid e-mail.

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Highscores table

1.	Jamine	389
2.	Ian	305
3.	Alan	275
4.	Therese	265
5.	Carl	219
6.	Ian	196
7.	Alan	105

Enter your message ...

Tags ... | Comment

Comments

Jamine score game

I hit the highscore today, yaay! ^^

Massa integer massa, elit pulvinar amet aliquam. Integer pellentesque! Adipiscing ac vel, scelerisque, nunc lectus adipiscing! Ultricies dictumst, hac ultrices!

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wf_highscore

wf_help

Rules

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

How to win

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

History of Klondike

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