

CardsWithFriends: User Manual

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Contents

Introduction	2
Registering and Logging In	2
Home page	2
Registering	2
Logging in	2
Logging out.....	2
Email and password constraints and security.....	2
Starting a Game	3
Making friends	3
Making game.....	3
Current Game display	3
Playing a game	3
Deck and Limitations.....	3
Dealing	3
Game Play	3
Winning	4
Card Display	4
Other Display Elements.....	4
Viewing Leaderboard	4
Features which do not require login.....	4
Mobile usage.....	5
User dependencies	5

Introduction

CardsWithFriends is a webapp that emulates playing the popular card game King's Corners. The app supports playing against other users and playing against artificial players.

Registering and Logging In

In order to use most features of the CardsWithFriends, a user must be logged in, which requires a registered account.

Home page

The homepage of CardsWithFriends can be found at cardswithfriends.herokuapp.com. From here, users can register and login by clicking the 'Login' or 'Register' buttons.

Registering

From the homepage, a user can register a new account by clicking the 'Register' button. Then, the user must fill in the 'Email', 'Password', and 'Password Again' fields. The email must be a valid email address, but it does not have to be a real, active email address. CardsWithFriends currently does not use email addresses for anything other than user login, and as display names for users; CardsWithFriends does not currently use emails to message users. Emails are not case sensitive.

The passwords must match in each password field. There are currently no restrictions on passwords, other than there must be at least one character. Passwords are kept very secure by using randomized salts and saving salts in the database.

Logging in

From the homepage, a user can login to an existing registered account by clicking the 'Login' button. On the login page, a user can enter their account email and password, then click 'Login'. The user will be redirected to their Current Games page. User sessions persist via cookies, so cookies must be enabled.

Logging out

At any page when a user is logged in, a user can log out by clicking the 'Logout' link in the menu bar. As the user logs out their cookie is destroyed and they are redirected to the home page.

Email and password constraints and security

Emails are not case sensitive.

Currently, usernames are used as display names for users. However, this back-end username field, is currently the same as the email so emails are displayed throughout the site. In the future, we can fully implement display names, so that users cannot inherently see other user's email.

There are currently no restrictions on passwords, other than there must be at least one character. Passwords are kept very secure all passwords are salted with randomly generated salt (using Java's BigInteger functionality) and the salt is saved in the database. If this was put into production https would be used for all db accesses.

Starting a Game

Making friends

Once logged in, a user can make friends by clicking the 'Friends' link in the menubar. Here, the user can add friends by typing another user's email or username (which are currently the same thing). Then, they can click 'Add a New Friend', and the user which has the entered email or username will become friends with the currently logged in user. Unlike in the real world, Friendship is mutual in CardsWithFriends: adding a friend will make both users friends with each other. Removing friends works the same way in that if someone has offended you you may remove them and you will be removed from their list as well.

Making game

A game can be created once a user is logged in by clicking the 'Create Game' link in the menu bar or by clicking the new game button while viewing the list of active/past games. The create game page displays several inputs to customize each game. The first input is for which friends to add to the game and is a multi-select list of all of the user's friends. To play a game with friends the user must add friends before creating the game. The second input on the create game is the number of artificial players. The game can have a maximum of five artificial players however there is also a limit in that the total number of players artificial or human can not exceed 6 (limitations of a 52 card deck). If an attempt is made to create a game with more than this maximum number of players an error is displayed and the game is not created. However if the input is valid the game is created and user is redirected to the game list.

Current Game display

When a user logs in they are automatically redirected to their games list. The list is separated by games that are active and games that have ended. The active game list is separated by games in which it is the user's turn and games for which it is another user's turn. To continue playing a game just click the game link from the list.

Playing a game

Games can last anywhere from a few minutes to several days as it all depends on how often a user plays their turn it is not a requirement that the game be played in real time and this app is more suited to allowing users, at their convenience, to login and continue playing.

This guide is also available in the website's 'About' page:

Deck and Limitations

A standard deck of 52 cards, 4 suits 13 cards to a suit, without jokers is used for the game. Aces are considered low for this game.

There needs to be at least two players, four is ideal, but there is a maximum of six players imposed by the number of cards in a deck.

Dealing

Seven cards are dealt to each player. The remaining deck is placed in the center of the playing surface and becomes the draw pile. To initialize the game take four cards from the draw pile and place them around the draw pile. These are the foundation piles and they are referenced from the position relative to the draw pile ie North, South, East, West.

Game Play

Players take turns in order and during their turn they can do any number of any of the following:

Place a card from their hand onto one of the foundation piles. The card must be of opposite suit color and one less in number than the card on the top of the foundation pile.

Place a king from their hand onto a space around the draw pile (North East, South East, South West, North West locations).

Move an entire foundation pile onto another foundation pile or empty spaces given that the bottom card of the pile to be moved is of opposite suit color and one less in number than the card on top of the pile being covered. This stipulation on the card does not apply for moving to blank spaces however only a King or a pile whose bottom card is a King may be placed on the North East, South East, South West, and North West locations.

Place any card from their hand onto a blank space for any of the original foundation piles - North, East, South, West.

At the end of their turn, when the player is out of moves, cards, or prefers to not play possible moves, the player takes a card from the draw pile and adds it to their hand.

Winning

To win the game a player must play all of the cards from their hand before the end of their turn. Once a player has won, any other players viewing the game screen will be notified that the end has ended. Any players not currently logged in and viewing the game screen will see that the game has been moved to past games upon their next login.

Card Display

This application has attempted to recreate the King's Corner experience digitally and in doing so decided to only display the top and bottom (the relevant cards) of each game pile. To move cards click the card in the player's hand and then click the game pile to move a card. To end the turn click the draw pile. To move game piles click the draw pile to move then click where to place it.

Other Display Elements

The main display elements are the game piles and the currently logged in user's hand. After that is a list of other players in the game and their remaining card counts. This list also displays which player's should go next. After that a list of past moves is displayed at the bottom of the page.

Viewing Leaderboard

To access the leaderboard, the user must login and click the leaderboard button in the top menu bar. If on mobile, the leaderboard button will appear after clicking the hamburger menu button on the top right of the page.

The leaderboard shows the number of wins and losses for all players, with the players with the highest win/loss ratio showing up at the top. The leaderboard is updated with the wins/losses of all users involved whenever a game is completed.

Features which do not require login

When a user is not logged in, they have access to the Homepage and the About pages.

A user can login and register from the homepage, and they can read the rules of King's Corner and about CardsWithFriends from the About page.

Mobile usage

The app can be accessed from any mobile device via the web browser. All navigation screens and the game page scale appropriately such that all functionality is easily accessible on smaller screens, behaving as if the app were in smaller browser window. The menu bar will collapse into a dropdown hamburger menu as the window width or screen size becomes small enough.

User dependencies

In order to use CardsWithFriends, there are some dependencies we assume users to fulfill. A user must have a running device with a web browser and internet access. Due to the barebones nature of CardsWithFriends, we are confident most web browsers will work with CardsWithFriends, and certainly any recent, mainstream browser such as Google Chrome, Mozilla Firefox, Safari, Microsoft Edge, or Internet Explorer. JavaScript must be enabled because CardsWithFriends uses JavaScript, particularly for gameplay. Cookies must be enabled because CardsWithFriends uses cookies to maintain user sessions.