HEARTHSTONE

Deck Sorcery

with **The Sunday Lunatics**

User Guide

Brought to you by:

THE SUNDAY LUNATICS

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System Overview

Deck Sorcery is a web based platform for Hearthstone card deck generation. The platform is targeted at Hearthstone players. Users are able to perform the tasks listed below:

User

Deck Building:
     ● Generate optimized deck from User Defined Deck
     ● Generate optimized deck from All Hearthstone Cards
 User's Card Library:
     ● View User's Library
 Hearthstone Card Library:
     ● View Cards by Hero Type

User Interface

Flask is used as Deck Sorcery's front end user interface. The backend bespoke web application is coded in Python. The results are sent to Flask to display the results onto the web interface.

Requirements

Deck Sorcery supports the following web browsers:
- Internet Explorer 11
- Microsoft Edge 39 and above
- Firefox 53 and 52 ESR and above
- Google Chrome Version 59 and above
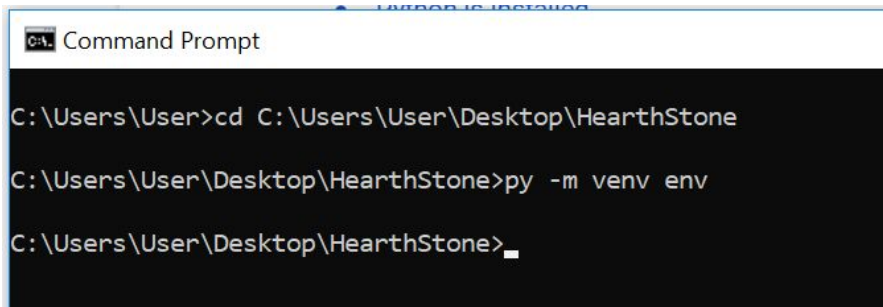- Safari Version 10 and above

Deployment

To run Deck Sorcery locally on a Windows Machine
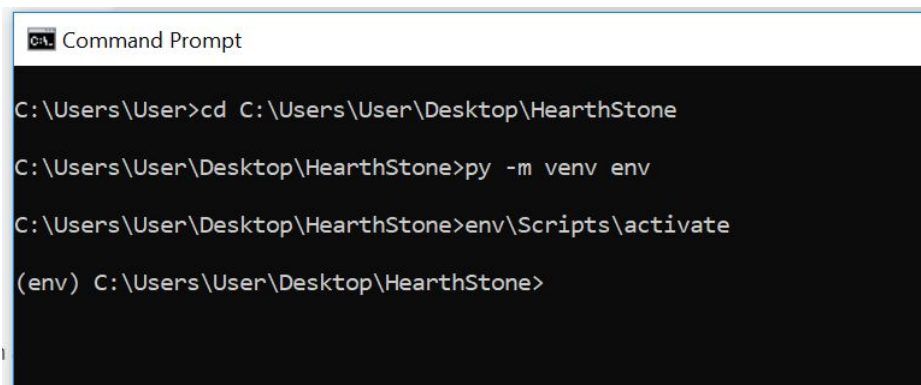Prerequisites:
- Python is Installed
- Pip is installed

1. Open Command Prompt
2. $ `git clone //todo:git_url`
3. Unzip folder

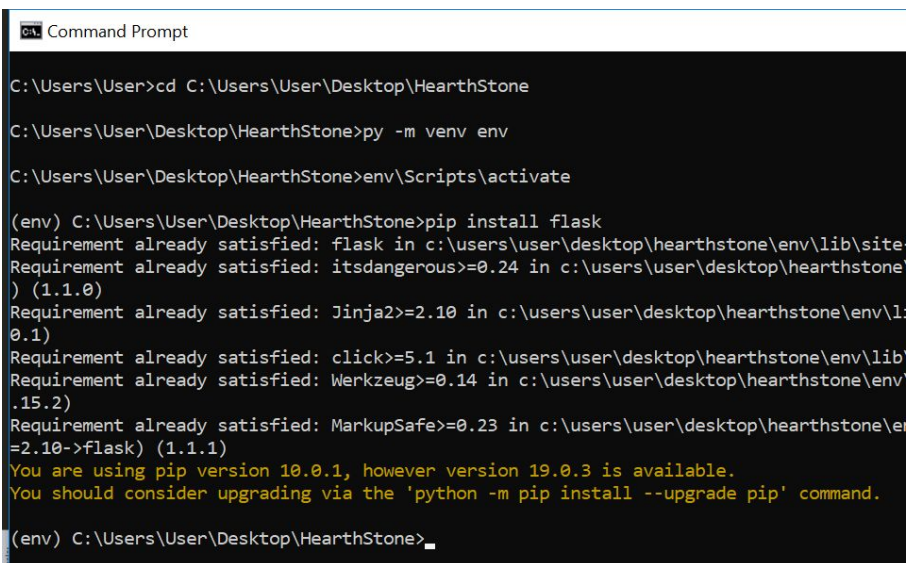4. $ `cd folder_location/`
5. Input `py -m venv env` and press enter

6. Input `env\Scripts\activate` and press enter

7. Input `pip install flask` and press enter

8. Set the Flask App, Input `set FLASK_APP=main.py` and press enter

```
(env) C:\Users\User\Desktop\HearthStone>set FLASK_APP=main.py
```

9. Install the required packages
   a. `pip install sklearn`
   b. `pip install deap`
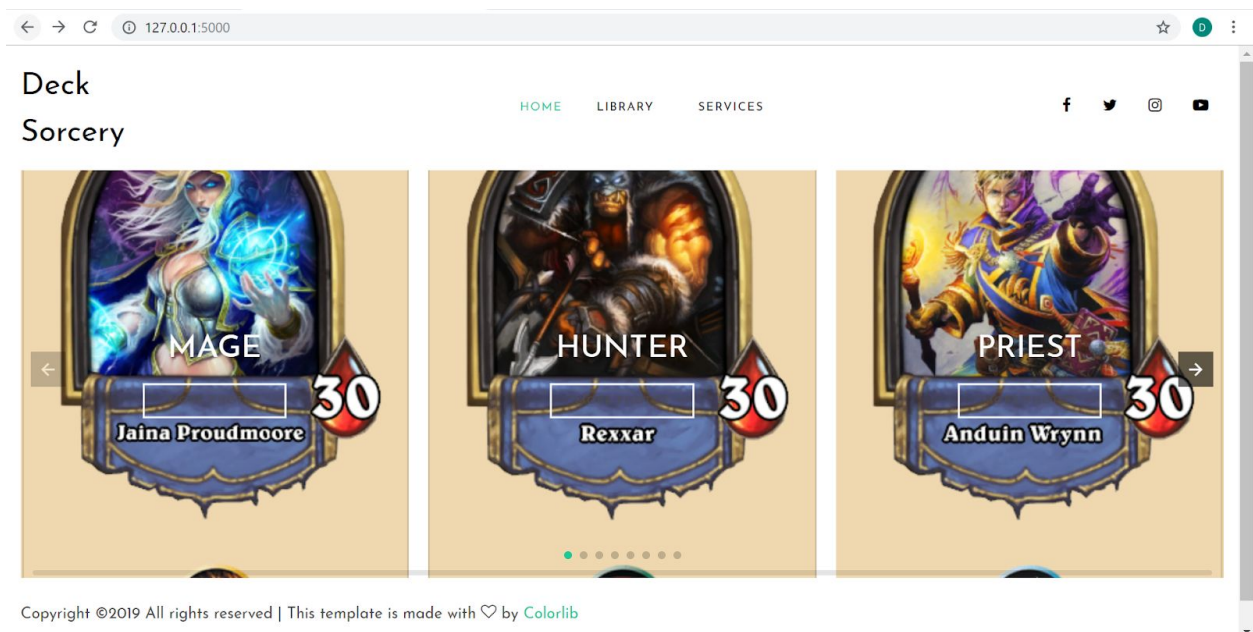10. Run the Flask App, input `flask run` and press Enter

```
(env) C:\Users\User\Desktop\HearthStone>flask run
 * Serving Flask app "main.py"
 * Environment: production
   WARNING: Do not use the development server in a production environment.
   Use a production WSGI server instead.
 * Debug mode: off
{'', 'PIRATE', 'MECHANICAL', 'MURLOC', 'ALL', 'ELEMENTAL', 'DRAGON', 'DEMON', 'BEAST', 'TOTEM'}
```

11. Navigate to the URL listed in Command Prompt

```
 * Running on http://127.0.0.1:5000/ (Press CTRL+C to qu
```

Get Started

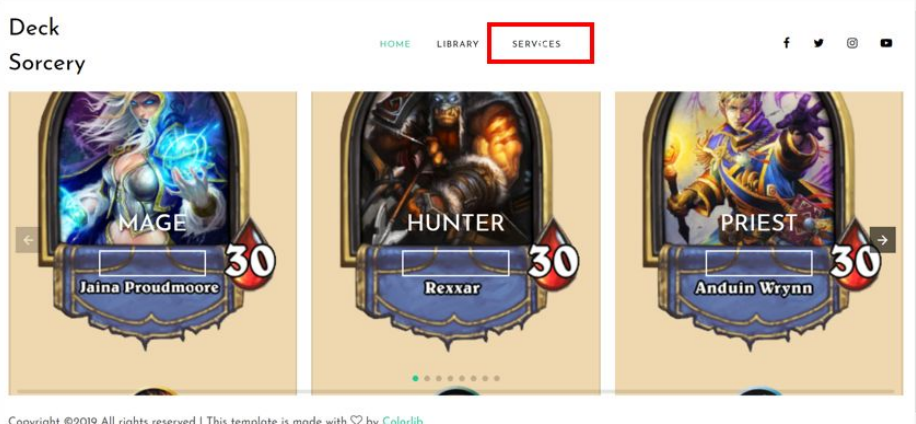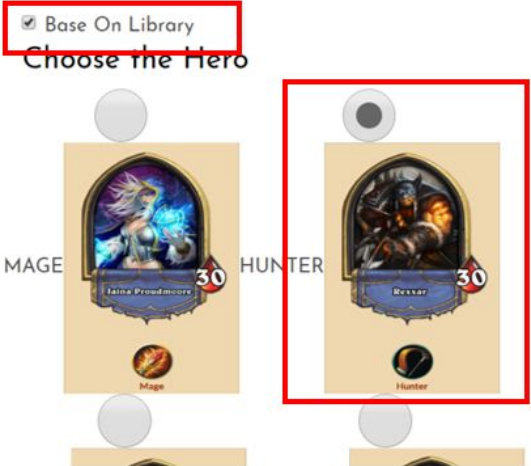Open up your preferred browser and go to the URL "http://127.0.0.1:5000/" as shown below:
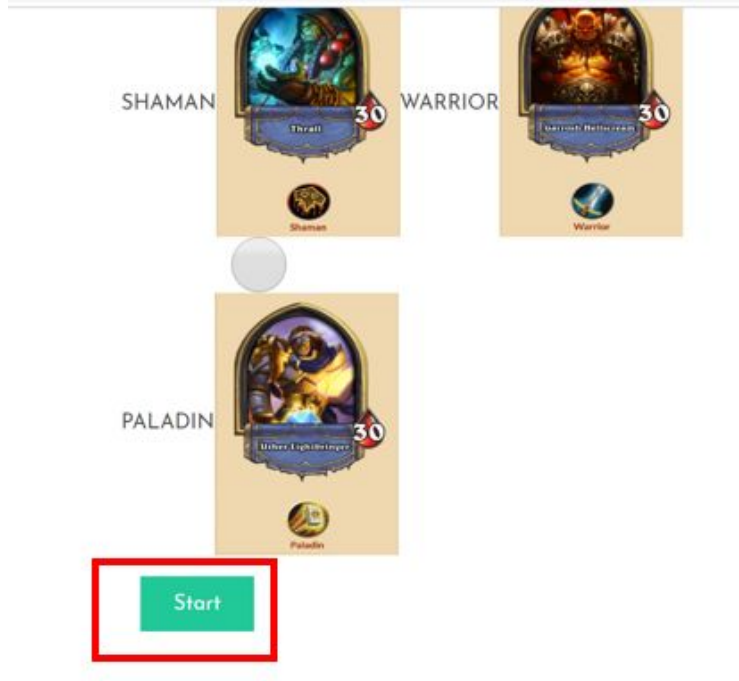
Walkthrough

The following section will provide a step-by-step walkthrough of the various actions which players can perform within Deck Sorcery

Deck Building:

Generate optimized deck from User Defined Deck

1. In the main page, select 'SERVICES'	
2. Check the *'Base on Library'* Checkbox 3. Select the desired Hero Type of the Deck	

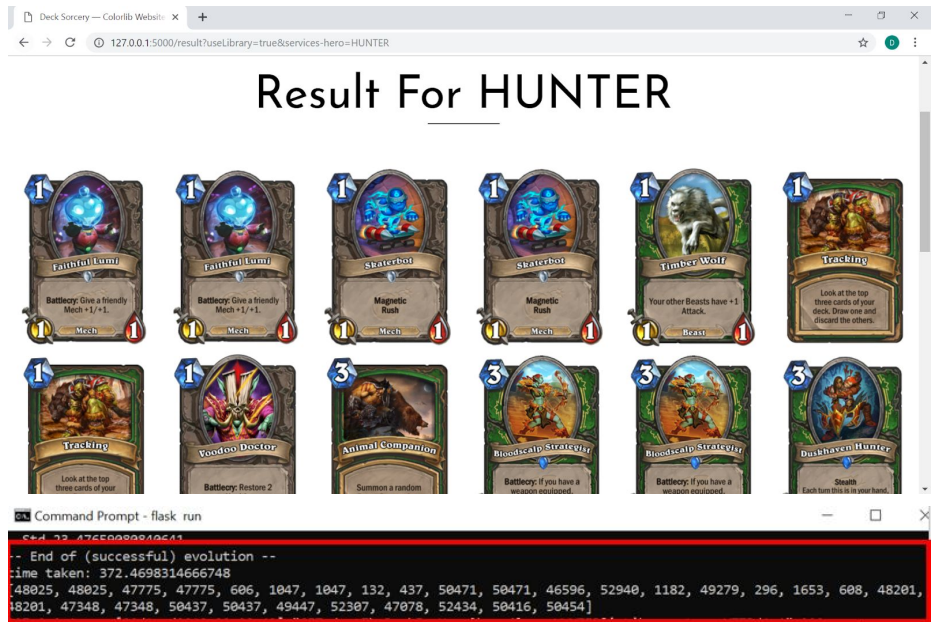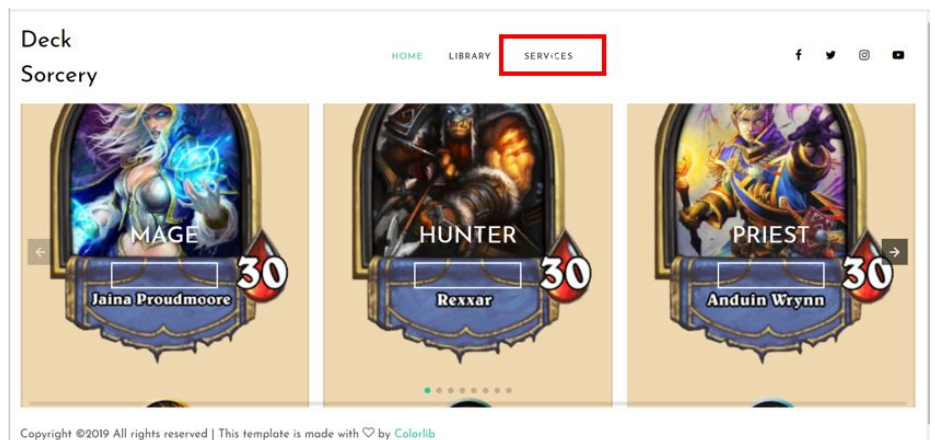|	
4. Scroll down the webpage and select 'Start'	

5. During the Deck Building process, the Screen will be blank. This is expected.
 	
6. You can monitor the progress of the deck building in the command prompt window.
	
	Deck Sorcery HOME LIBRARY SERVICES
	
	# Result For HUNTER
	
	Command Prompt - flask run
	
	``
	   Evaluated 392 individuals
	   Min -100.0
	   Max 55.53314035987604
	   Avg 52.63027075095348
	   Std 20.858633540453287
	-- Generation 58 --
	offspring length: 600
	   Evaluated 355 individuals
	   Min -100.0
	   Max 55.53314035987604
	   Avg 53.66581859677545
	   Std 16.695888893112937
	-- Generation 59 --
	offspring length: 600
	   Evaluated 373 individuals
	   Min -100.0
	   Max 55.532991798566144
	   Avg 53.678331573469215
	   Std 16.69716088099014
	-- Generation 60 --
	offspring length: 600
	   Evaluated 386 individuals
	   Min -100.0
	   Max 55.532991798566144
	   Avg 53.15132792896227
	   Std 18.8997448829775
	-- Generation 61 --
	offspring length: 600
	   Evaluated 362 individuals
	``

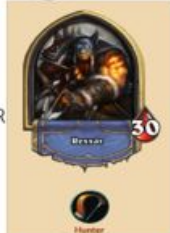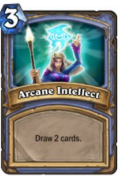|	
7. The generated deck will be displayed. 8. You can view the time taken to generate the deck and the Card IDs displayed in the command prompt window.	

Generate optimized deck from All Hearthstone Cards

1. In the main page, select 'SERVICES'	

Generate My Deck

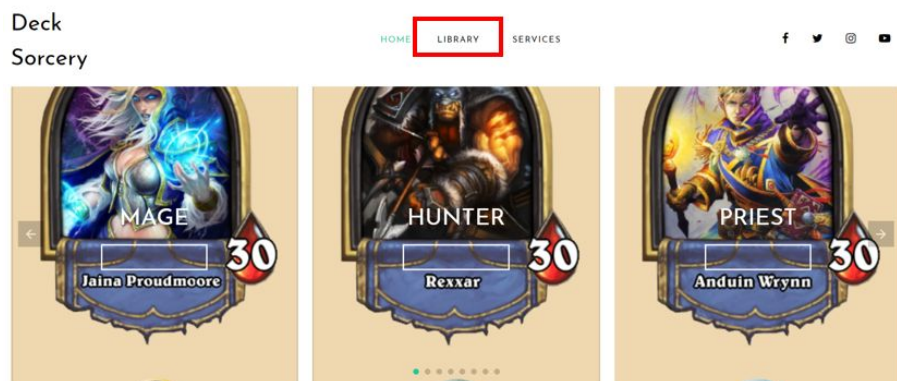|	
2. Select the desired Hero Type of the Deck 3. Leave the *'Base on Library'* checkbox unchecked	
4. Scroll down the webpage and select 'Start'	
5. During the Deck Building process, the	

Screen will be blank. This is expected.
6. You can monitor the progress of the deck building in the command prompt window.
	Deck Sorcery
	
	HOME LIBRARY SERVICES
	
	# Result For MAGE
	
	``
	Command Prompt - flask run — □ ×
	offspring length: 600
	  Evaluated 374 individuals
	  Min -100.0
	  Max 52.47757514253918
	  Avg 48.82766118336131
	  Std 23.004597887080088
	-- Generation 153 --
	offspring length: 600
	  Evaluated 335 individuals
	  Min -100.0
	  Max 52.47757514253918
	  Avg 48.57535671275007
	  Std 23.791877576928535
	-- Generation 154 --
	offspring length: 600
	  Evaluated 356 individuals
	  Min -100.0
	  Max 52.47757514253918
	  Avg 48.59100831105727
	  Std 23.794313136493734
	-- Generation 155 --
	offspring length: 600
	  Evaluated 349 individuals
	  Min -100.0
	  Max 52.47757514253918
	  Avg 50.118102505175756
	  Std 18.52597497810502
	-- Generation 156 --
	offspring length: 600
	``

7. The generated deck will be displayed. 8. You can view the time taken to generate the deck and the Card IDs displayed in the command prompt window.	Deck Sorcery HOME LIBRARY SERVICES f y ⊙ ▶ # Result For MAGE

User's Card Library:

View User's Library

1. In the Home screen, select 'LIBRARY'.	

2. All cards in the User's Library will be displayed.	My Library(total 4 cards)

Hearthstone Card Library:

View Cards by Hero Type

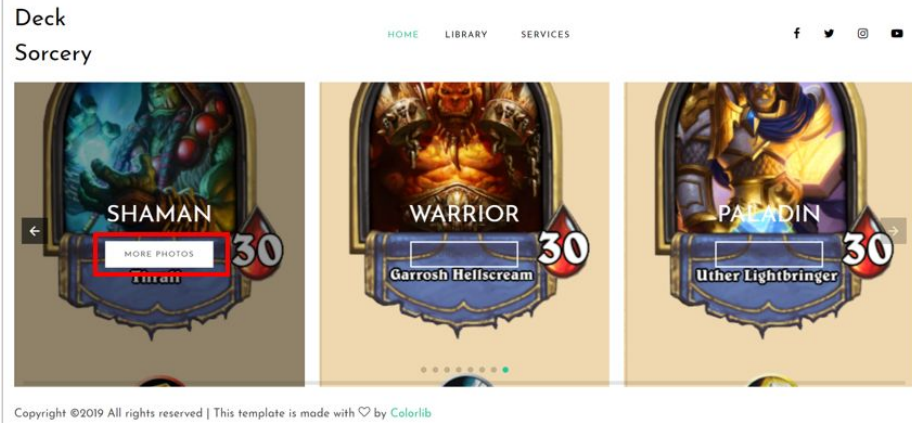|	
2. In the Home screen, scroll through the Hero types using the left and right arrows or the navigation panel below.	

3. Hover over the Hero type and select 'MORE PHOTOS'	
4. All cards belonging to the Hero type selected will de displayed	