

The **Mistakes**: Jesse Xie (PM), Alif Abdullah, Daniel Sooknanan, Raymond Yeung  
SoftDev

P01 -- ArRESTed Development Design Doc

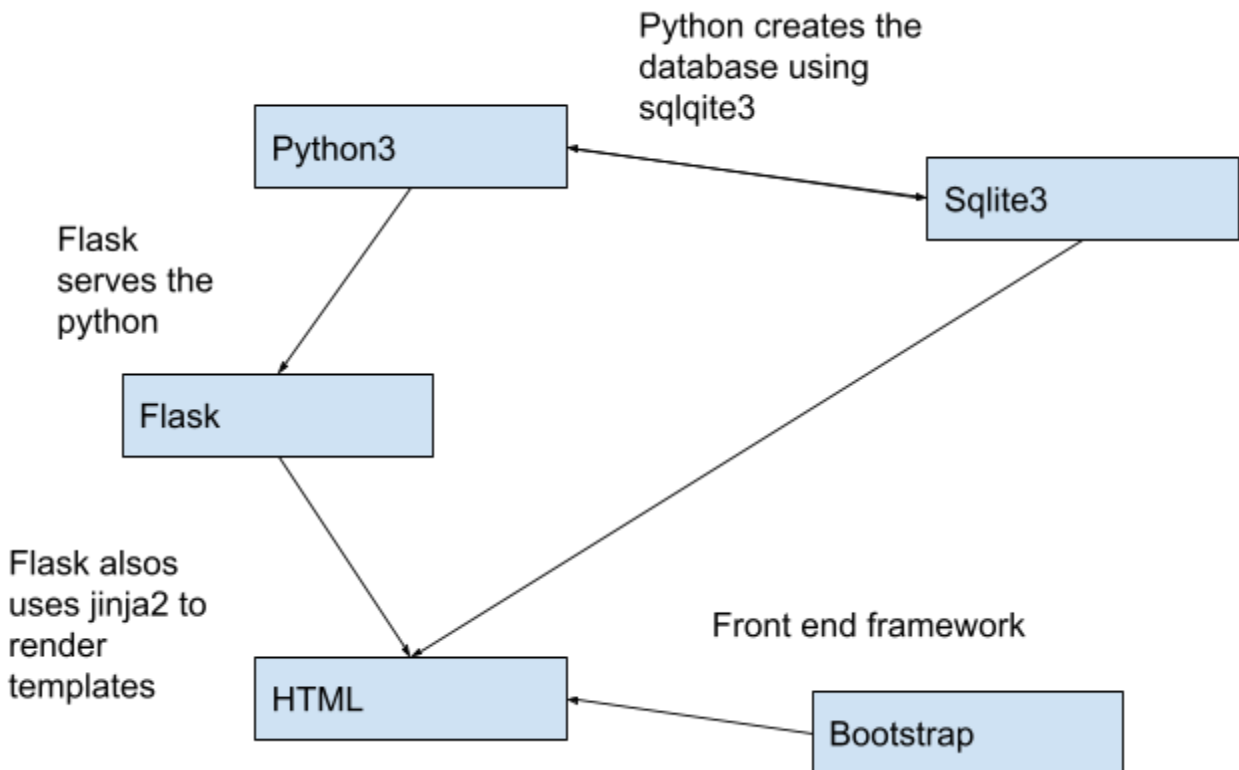
2021-12-08

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### **Program Components:**

- Flask
  - We will use flask to host our webpage, save sessions, and facilitate onscreen interactions with the user.
  - Data inputted into flask forms will be saved into our sqlite3 database.
- Python3
  - We will use python to facilitate interactions with the database and the other components.
  - Python will create and fill in databases, as well as work with flask and html to make our pages
- Sqlite3
  - We will use sqlite3 as our backend data storage system, and save our relevant data in tables.
- Bootstrap
  - We will use bootstrap as our framework in creating a visually pleasing and user friendly interface.
  - Bootstrap will work with HTML to create pages with all the necessary features.
- HTML
  - We will use HTML to create the basic version of our webpage which will be fleshed out by bootstrap.

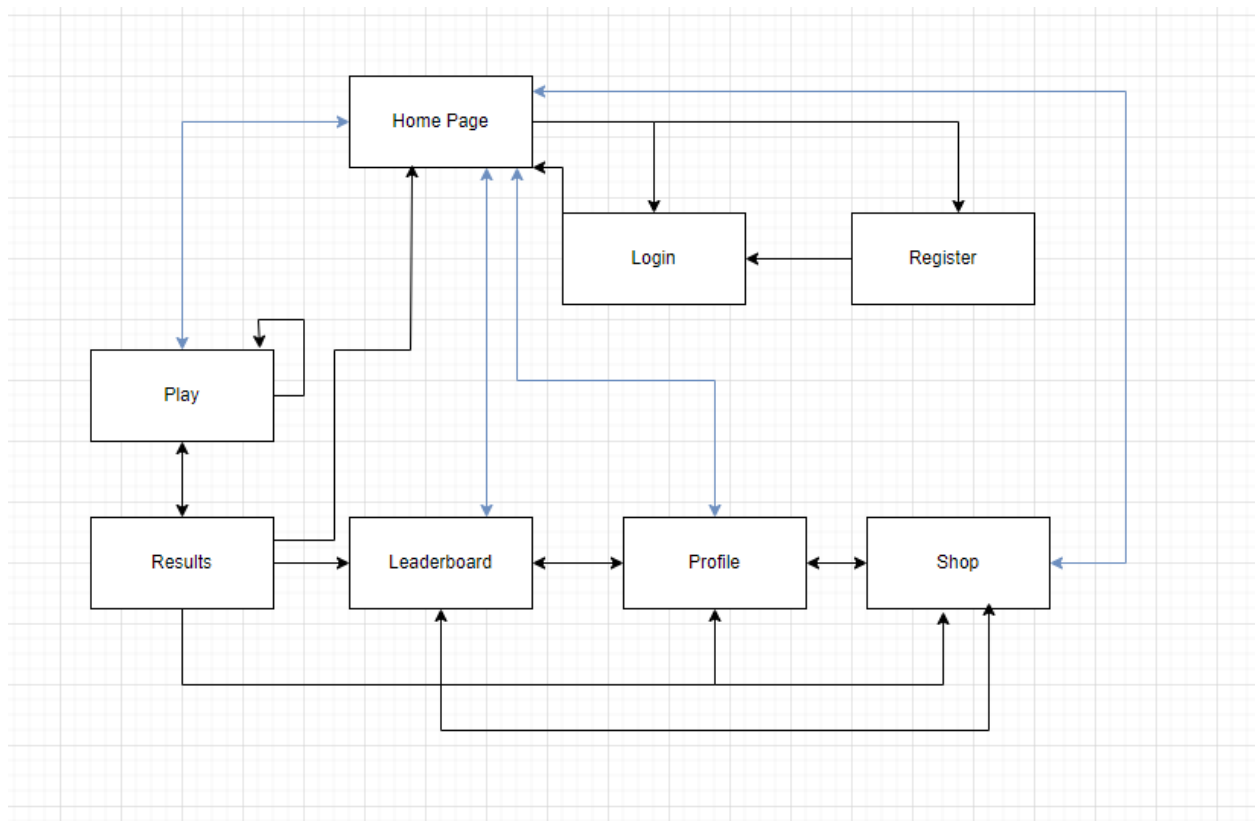
### Component Map:



### Database Organization:

- Users table: username TEXT, password TEXT, tokens INTEGER, wins INTEGER, losses INTEGER
- Items table: name TEXT, imageUrl TEXT, owner TEXT
- Market table: name TEXT, imageUrl TEXT, price INTEGER

## Site Map:



## Page Descriptions:

**Login / Register** (*Not Logged In, Route: /*) - Prompts the user to enter their login credentials, or sign up for an account if they do not currently have one

**Home** (*Logged In, Route: /*) - Central hub to allow users access to Play, Profile, Shop, and Leaderboard.

**Play** (*Logged In, Route: /play*) - Allows to user to play against a set number N CPUs in the card game Blackjack.

**Results** (*Logged In, Route: /results*) - Awards the user points based on whether they won the game or lost. Gives random rewards (new colors, profile pictures).

Leaderboard (*Logged In, Route: /leaderboard*) - Displays a list of users ranked on how many wins they have. Also, displays their current amount of total points.

Shop / Market (*Logged In, Route: /leaderboard*) - Displays a grid of purchasable items (colors, profile pictures). Users can use points (earned from winning games) to buy such items and use them on their profiles. Available items cycle on a weekly basis or a daily basis (depending on the type of item).

Profile - Allows the user to change their profile picture, color, & display name.

APIs:

- Deck of Cards
  - The Deck of Cards API will help us in dealing, shuffling, and returning cards for our blackjack game.
- Color
  - The Color API will generate a random color that we will use for cosmetic purposes
- Picsum (may change based on needs)
  - Generates a random picture with a specified size.

Framework(why/how):

- Bootstrap: Personally, we prefer the structure and keywords utilized in Bootstrap as opposed to Foundation. More specifically, we'll make use of features like the navbar to create a dynamic website that is also aesthetically pleasing.

Roles:

- Jesse (PM): Manage backend development of database, facilitate interactions with python
- Alif: Manage development of python code, establish interactions between flask and python
- Daniel: Manage front end development, create easy to use interface
- Raymond: Manage API data retrieval, ensure proper utilization of APIs

Target Ship Date:

December 23, 2021