

# **Checkers Project Design Document**

*Team Nomex Blankets – Han Zhang, Cameron Nelson, Kevin Cao*

**Target Ship Date:** 01/05/22

## **Game Functionality:**

- Checkers - 8x8 board with two players
- Played on the same device, taking turns
- P1 goes, then P2, etc.
- Users get to choose the Emoji for their custom checkers pieces
- Background image from NASA changes daily to make checkers more fun!
- User assigned random profile picture after creating account

## **File Tree:**

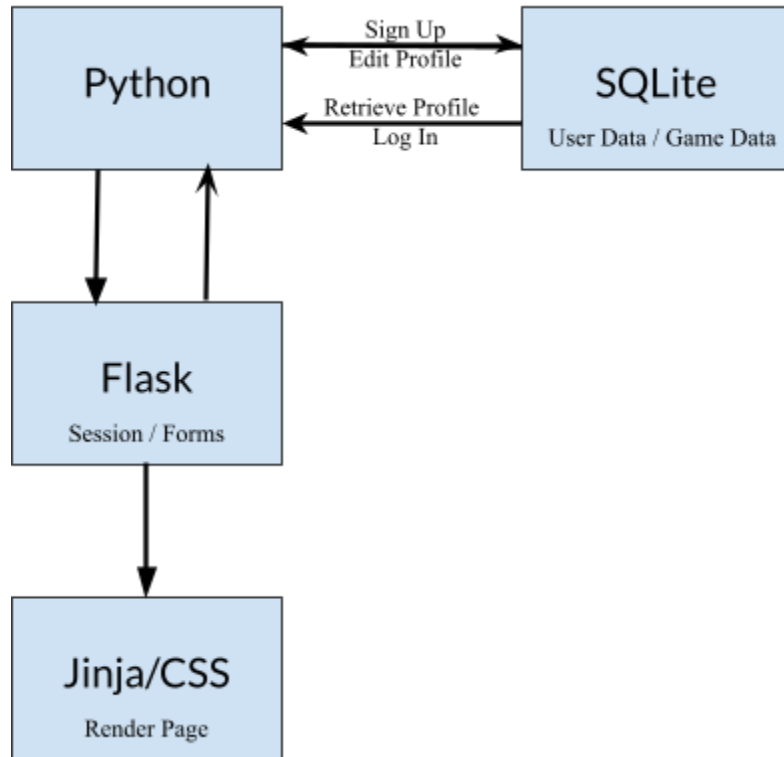
```
flask_app
├── __init__.py
├── users.db
├── templates/
│   ├── layout.html
│   └── index.html
├── static/
│   └── css/
│       └── style.css
```

## **Program Component List:**

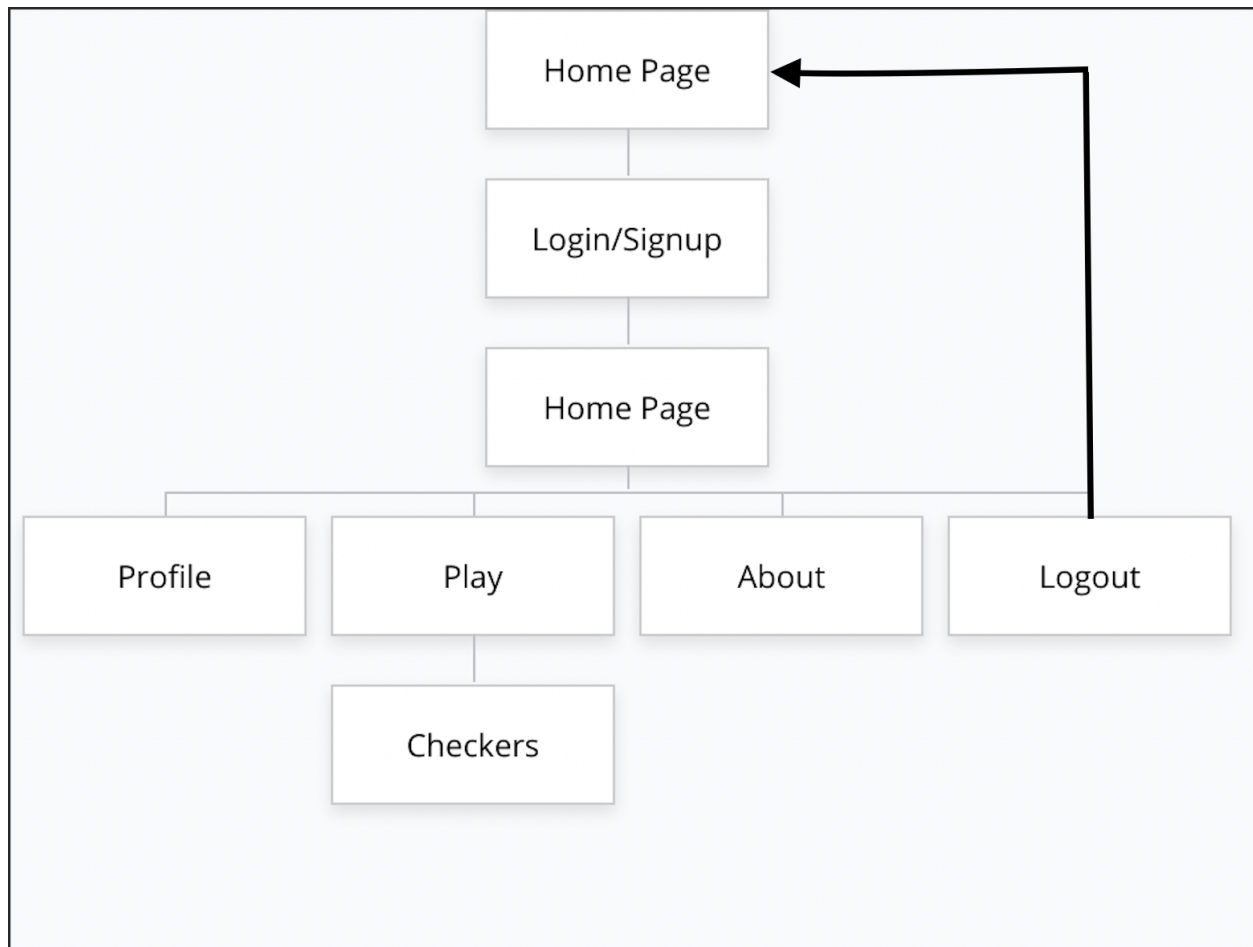
- Python
  - The python app would be used for the creation of the database itself and for inserting data / pulling data from it.
- SQLite
  - We use SQLite to interact with our database. The commands used in the python app would come from this component.
- Jinja
  - Jinja takes the data from the backend for the website contents, page title, and other bits and puts them where we want in our webpage.
- Flask
  - Flask serves the actual web pages jinja will be rendering (does network stuff).
  - Session allows for the site to allow a logged-in user to play a game of checkers online, against other people. If they are not logged in, then they will have to play against another player, locally.
- CSS
  - Bootstrap to have a coherent theme

- Custom CSS to fine tune certain elements of the front-end
  - Create the 8x8 checkerboard

**Component Map:**



## Front-End Sitemap:



## Database Organization

- Tables:

### 1. USERS

ROWID	Username	Hashed Password	URL to Profile Picture (random dog image)
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## API's:

- Emojapi - [https://github.com/stuy-softdev/notes-and-code/blob/main/api\\_kb/411\\_on\\_Emoji.md](https://github.com/stuy-softdev/notes-and-code/blob/main/api_kb/411_on_Emoji.md)
  - Used as the checker pieces
  - Each player gets a random emoji as their piece.
- APOD - [https://github.com/stuy-softdev/notes-and-code/blob/main/api\\_kb/411\\_on\\_APOD.md](https://github.com/stuy-softdev/notes-and-code/blob/main/api_kb/411_on_APOD.md)
  - Used to grab daily image for NASA for site background
- Dog Breeds API - [https://github.com/stuy-softdev/notes-and-code/blob/main/api\\_kb/411\\_on\\_DogBreeds.md](https://github.com/stuy-softdev/notes-and-code/blob/main/api_kb/411_on_DogBreeds.md)
  - Used to randomly generate a profile image

**Front-End: Bootstrap**

- Looks nicer
- More documentation

**Member Assignments:**

- Cameron: Working on backend stuff and database.
- Kevin: Working to create frontend HTML templates and then CSS for later.
- Han: Project Manager + database.