Checkers Project Design Document
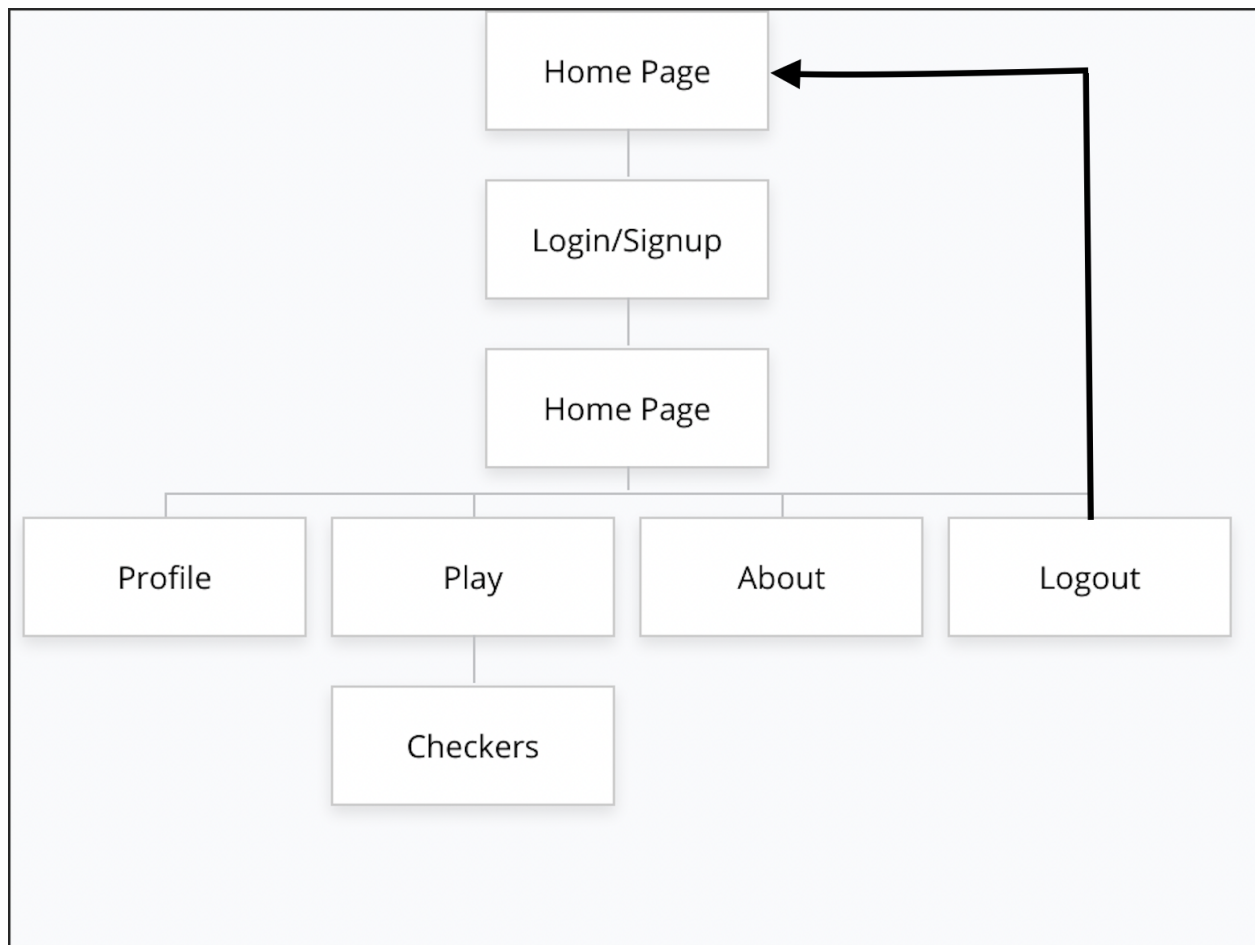
Team Nomex Blankets – Han Zhang, Cameron Nelson, Kevin Cao

Target Ship Date: 01/05/22

File Tree:

```
flask_app
├── __init__.py
├── users.db
├── templates/
│   ├── layout.html
│   ├── index.html
├── static/
│   ├── css/
│   │   ├── style.css
```
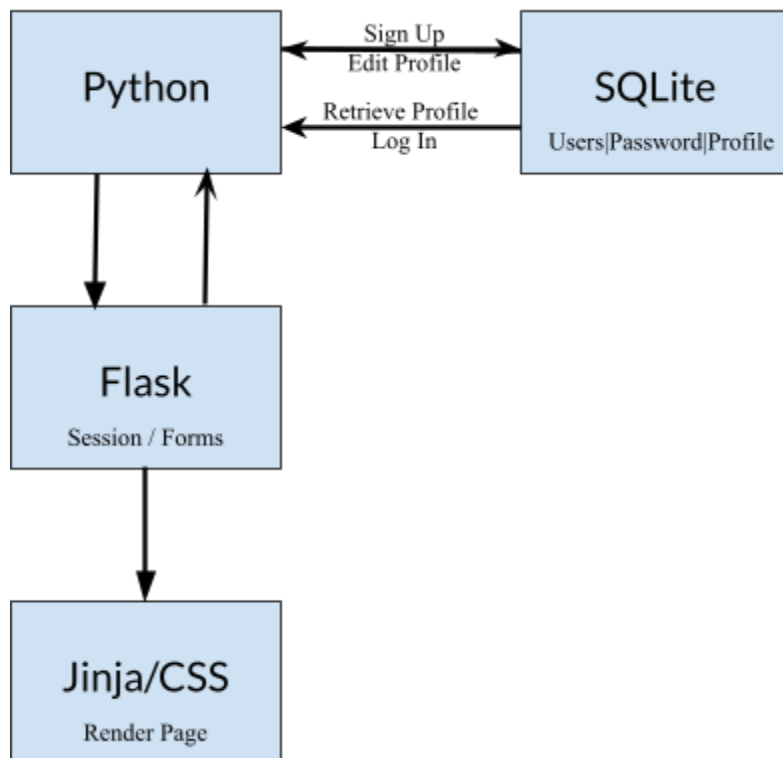
Front-End Sitemap:

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

Component Map:

Database Organization
- Tables:
  1. **USERS**
     a. Stores user data
     b. Holds username, hashed password, url to random dog image + ROWID

API's:
- Emoji API - https://github.com/stuy-softdev/notes-and-code/blob/main/api_kb/411_on_Emoji.md
- APOD - https://github.com/stuy-softdev/notes-and-code/blob/main/api_kb/411_on_APOD.md
- Dog Breeds API - https://github.com/stuy-softdev/notes-and-code/blob/main/api_kb/411_on_DogBreeds.md

Front-End: Bootstrap
- Looks nicer
- More documentation

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

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.