<div align="center">**P4: Design Doc**</div>

BooSeokSoon
PM Wilson Mach, April Li, Jasmine Yuen
SoftDev
Period 2
Target Ship Date: 2023-5-26

Framework: Bootstrap

Datasets:
- Taylor Swift lyrics: https://www.kaggle.com/datasets/thespacefreak/taylor-swift-song-lyrics-all-albums
- Taylor Swift analysis: https://www.kaggle.com/datasets/thespacefreak/taylor-swift-spotify-data

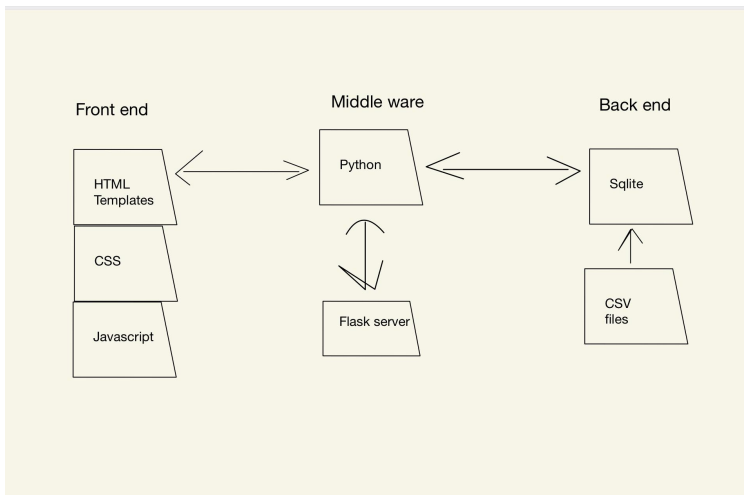**Website Description:** analyze Taylor Swift songs
- Plot data of songs based on popularity, danceability, etc.
  - Data is interactive
  - Can view by albums or by song title
- Analyze what makes popular Taylor Swift songs popular
  - Data for entered Taylor Swift song
- Buzzfeed quiz: what song are you
- Song recommendations based on users favorite songs
- Generates songs based on user input
  - Use slider for each aspect of music
  - Generates most closely matched song
- Profile page with user information
- Login/signup page: allows users to log in
  - Log in is needed before user can use site

Bootstrap:
- We have all used bootstrap before so we are most comfortable with using bootstrap again
- Bootstrap have class names that are easy to use
- Bootstrap .navbar class to allow users to navigate through the different pages on our site
- Has a cool spinner!

SASS: We will be incorporating SASS from the TedTalks. We liked how flexible SASS was in comparison to just straight CSS. With SASS, it'll make formatting and changing the style of our website easier. We are familiar with SASS already as Wilson presented on SASS and Jasmine has prior experience using SASS.

Component Map

Front end   Middle ware   Back end

HTML Templates → Python ← Sqlite

CSS

Javascript   Flask server   CSV files

Python
- db.py: connects database with flask server

SQlite3
- login.db: Store all login data for users
- song.db: Store user song recommendations
- user.db: Store user profile page information

HTML Template
- login.html - login page
- signup.html - signup page
- profile.html - views user profile (song recommendations, quiz results, etc)
- data.html - page to show graphs and analysis of Taylor Swift songs
- quiz.html - buzzfeed quiz page

Flask
- __init.py - Flask will render html templates onto the browser

Front End Framework (Bootstrap & SASS)
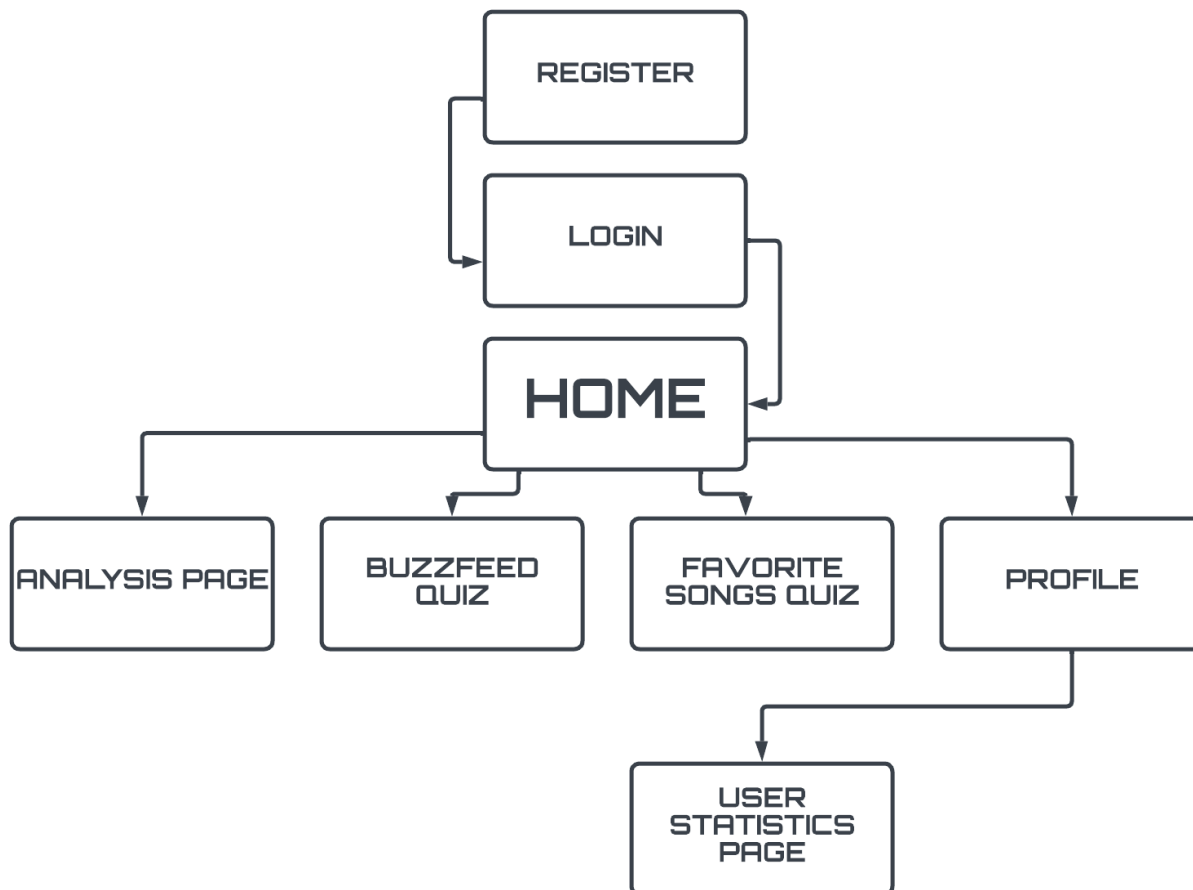- Will beautify the website
- Use SASS to simplify CSS stylesheet

Javascript
- style.js - holds javascript for websites
- Making the site interactive and to plot charts

Database Organization
- User login information is stored
- User has bio, username, profile
- Previous buzzfeed test results stored
- Users top favorite songs stored

Site Map

```
            ┌──────────────┐
            │   REGISTER   │
            └──────────────┘

            ┌──────────────┐
            │    LOGIN      │
            └──────────────┘

            ┌──────────────┐
            │    HOME       │
            └──────────────┘

┌──────────────┐ ┌──────────────┐ ┌──────────────┐ ┌──────────────┐
│ANALYSIS PAGE │ │  BUZZFEED    │ │  FAVORITE    │ │   PROFILE    │
│              │ │   QUIZ       │ │ SONGS QUIZ   │ │              │
└──────────────┘ └──────────────┘ └──────────────┘ └──────────────┘

                              ┌──────────────┐
                              │    USER      │
                              │ STATISTICS   │
                              │   PAGE       │
                              └──────────────┘
```

Login Page
- User inputs username and password to enter website

Register Page
- User inputs new unique username and creates a password

Home Page
- Description of who Taylor Swift is
- Albums with song lists
- Will have a dropdown menu for Analysis Page, Buzzfeed Page, Favorite Songs Page

Analysis Page
- Graphs analyzing Taylor Swift songs and what makes them popular

Buzzfeed Page
- Based on questions answered by user, they will be assigned a Taylor Swift song

Favorite Songs Page
- User inputs favorite songs and website recommends user their songs

Profile Page
- Buzzfeed results
- Favorite songs
- Songs recommended
- User description

Breakdown of Tasks
- Jasmine: SQlite3 & Bootstrap & SASS
- Wilson: Javascript & HTML & SASS

- April: Flask & Python