Project04: Makers Makin' It, Act II -- The Seequel
TNPG: NINTendo
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TARGET SHIP DATE: 2025-04-09

NINTendo - DESIGN DOCUMENT v.0

Description

Social anxiety, also known as social phobia, affects millions of people worldwide. This dataset was compiled using a combination of survey responses, observational studies, and self-reported data. Participants provided information on lifestyle habits, stress, social anxiety symptoms, and personal experiences with mental health.

Our group will examine several features such as demographics, lifestyle, and mental health history to see how they relate to one another and affect social anxiety. This is important for finding trends in the dataset.

We will communicate this information through (website??). Each category will be a separate page including a visualization and outlines of general trends. There will be a "General Information" page that simply displays the graphs with shorter descriptions, which logged-out users would be able to access. All category pages will be inaccessible for users who are not logged in. Log In/Sign up/Log out pages will be provided. Categorized pages will include much more in-depth information (i.e. the "Lifestyle" page would include detailed information on Sleep hours, Physical activity, Diet quality, etc.)

Program Components

1. Flask/Python
    a. Handles user authentication, session management, and redirection
    b. Interacts with databases to pass information for creating graphs
    c. Routing between pages
2. SQLite3
    a. Stores information about user credentials, information from datasets on social anxiety/depression
    b. Allows analysis of demographics, lifestyle choices, mental health history, etc.
3. HTML/CSS
    a. User interface and showing different pages for each category
    b. Interacts with javascript to display information
4. JS (Chart.js)
    a. Create graphs for each category and potentially participant information
    b. Potentially animate graphs

Component Map
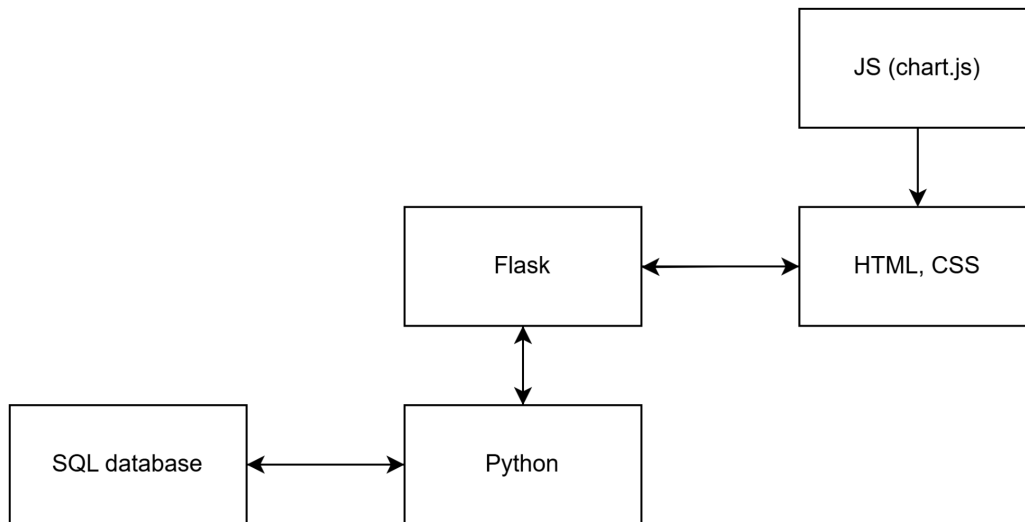
Site Map
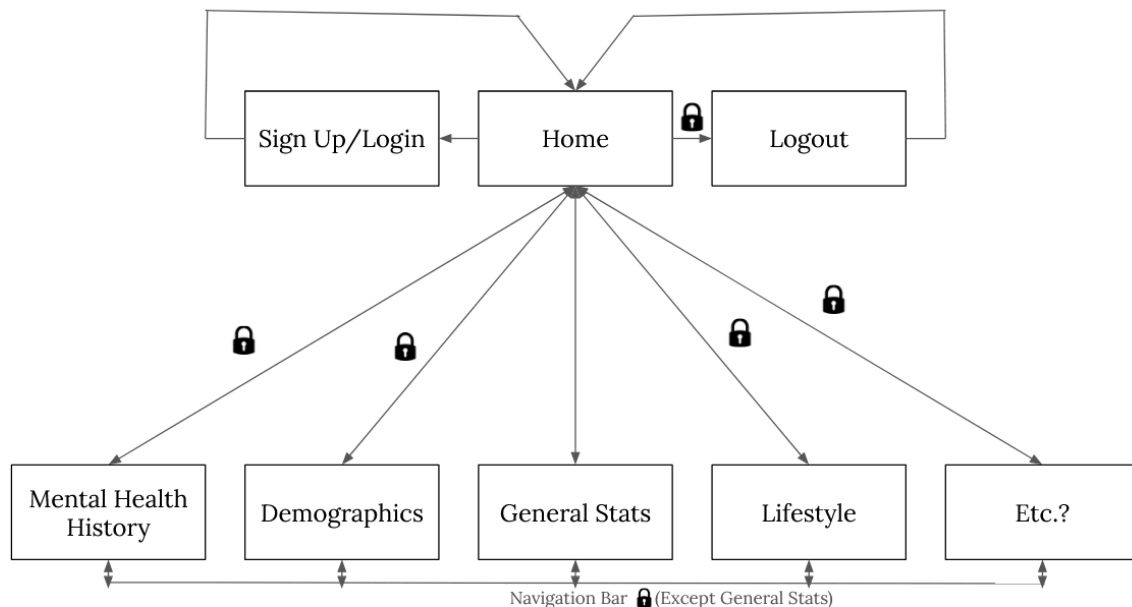
Data Visualization Library

We will use the social anxiety dataset from kaggle which represents individuals with varying levels of social anxiety and different lifestyle factors. We picked this dataset because it seemed relevant as mental health is important but sometimes overlooked. In order to visualize the trends and intricacies within the dataset, we have decided to use Chart.js to do so. The library provides us access to interactive and responsive charts that help display relationships

between factors in the dataset. Some of these different factors include caffeine usage and stress, which may be relevant to Stuyvesant students). Through all of Chart.js's features, we can present the data to the user in an easy to understand and engaging way to allow for dynamic exploration!

https://www.kaggle.com/datasets/natezhang123/social-anxiety-dataset?select=enhanced_anxiety_dataset.csv

Users:

id	name_first	name_last	hash	email	dob	profile
INT	STR	STR	PYBYTE	STR	DATE	JSON

Visualization:

record_id	category	factor	factor_value	generated_at
INT	STR	STR	FLOAT	DATE
(Unique identifier for each record)	Ex: Lifestyle, Demographics	Name of factor	(value for visual)	(Timestamp)

Survey Responses(?)*:

response_id	user_id	age	gender	stress_level
INT	INT	INT	STR	INT
Unique ID	Links to User Table	Age of User	Gender of User	Scale 1 - 10 (Self Report)

anxiety_score	sleep_hours	social_interaction	date_submited
INT	FLOAT	INT	DATE
Obscure number we will define later	Average sleep	# of social interactions per week	(Timestamp)

* (Don't know if including this)

APIs

We do not use any APIs in our project.

Front-End Framework

We will be using the "Bootstrap" front-end framework for our project.

Bootstrap is a really versatile and lightweight framework that can help us deliver a clean and polished look on our site without much trouble or being overbearing. It has many preset options to pick from when choosing the styling and is very well documented, such that it's not hard at all to see how we can implement certain functionalities.

We will use bootstrap for some of the following:
- Site-wide navbar for easy traversal
- Forms for logging in, signing up, logging out, and entering data to be seen/filtered for
- Grid functionalities for formatting all our JS and graphs
- And all other finishing touches to create a cohesive final product

Task Breakdown

1. Naomi Lai (Project Manager): JS
   a. Graphs for each collection: demographics, lifestyle, health & mental indicators
   b. Labeling/colors for graphs
2. Tim Ng: DataBase (SQLite3)
   a. Python ~ SQL interactions
   b. Making database structure for users and dataset
3. Naf Murtaza: HTML/CSS
   a. HTML for each page
   b. Styling through CSS and Bootstrap
4. Ivan Gontchar: Python
   a. Overall python structure
   b. Flask routing