Project05:
TNPG: YNCA
Roster: Tim Ng, Aditya Anand, Jason Chao, Stella Yampolsky
TARGET SHIP DATE: 6/12/2025

YNCA - DESIGN DOCUMENT v.1.1

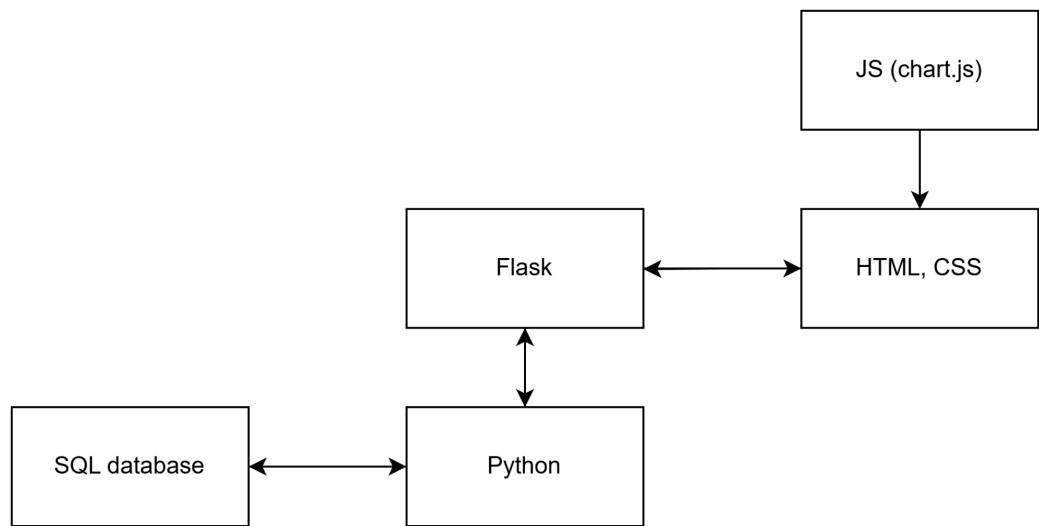
Description

Our project is a recreation of Project 0 (the storytelling website), designed to be more interactive and "fun." The registration page mimics *The Password Game*, requiring users to complete a minigame to create a valid password. After logging in, users will navigate the site and encounter obstacles while progressing through different storytelling pages. Upon navigating through the website, the user will receive a reward.
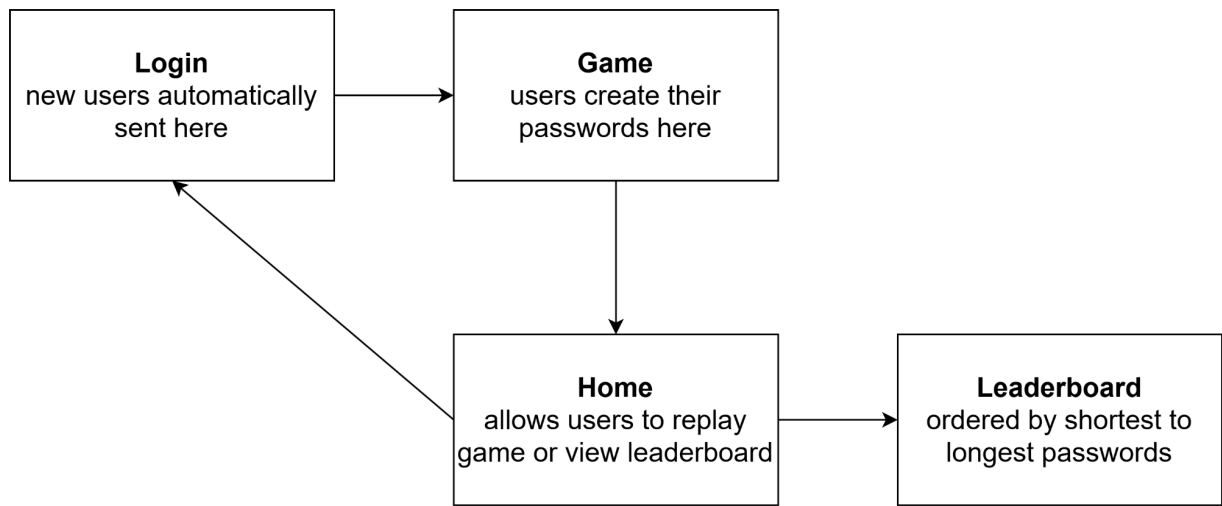
Program Components

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. MongoDB
   a. Stores information about user credentials for leaderboard and cookies
3. HTML
   a. User interface and showing different pages for each category
   b. Interacts with javascript to display information
4. JS (Chart.js)
   a. Animations/refreshing/game logic
   b. Will contain the rules for our password game
5. D3 (Stretch Goal)
   a. Enhances visualization for any interactive story components (stretch?) and data exploration
   b. Not entirely sure how this would fit in with project yet

Component Map

```
                                            ┌──────────────┐
                                            │  JS (chart.js)│
                                            └──────┬───────┘
                                                   │
                                                   ▼
        ┌──────────────┐              ┌──────────────┐
        │    Flask     │◄────────────►│   HTML, CSS  │
        └──────┬───────┘              └──────────────┘
               │
               ▼
┌──────────────┐              ┌──────────────┐
│  SQL database│◄────────────►│    Python    │
└──────────────┘              └──────────────┘
```

Site Map

```
┌─────────────────────┐        ┌─────────────────────┐
│       Login         │        │        Game         │
│ new users automatically│───►│ users create their  │
│      sent here      │        │  passwords here     │
└─────────────────────┘        └──────────┬──────────┘
          ▲                                │
          │                                ▼
          │               ┌─────────────────────┐      ┌─────────────────────┐
          └───────────────│        Home         │      │    Leaderboard      │
                          │ allows users to replay│───►│ ordered by shortest to│
                          │ game or view leaderboard│    │ longest passwords   │
                          └─────────────────────┘      └─────────────────────┘
```

Database Organization

<u>Users</u>:

APIs

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

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 potential graphs
- And all other finishing touches to create a cohesive final product

Task Breakdown

TASK	Tim Ng	Aditya Anand	Jason Chao	Stella Yampolsky
Set up Flask and MongoDB environment		X		X
Build User Authentication and Management Backend	X			
Potential D3 Component (tentative)	X	X	X	
Build Database				X
Java Script	X	X	X	X
Frontend (Tailwind)			X	
Final Testing and Bug Fixing	X	X	X	X

#gudfam