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SoftDev

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Design Doc

Components

What do we need? What should we import?

- ❖ Depending on our approach for the drawings, we may need to use the p5 library
- ❖ Flask
 - To connect interface with backend (displaying all the pages and getting form responses)
 - Cookies for the login and registration (so that users can access/edit their own GIFs later)
- ❖ Sqlite
 - Databases for user data and respective GIF frames
- ❖ HTML
 - For templates of each webpage
- ❖ Foundation
 - To add aesthetic appeal to each webpage
- ❖ JS
 - Needed to draw on canvas
 - Communicates with the user pressing buttons on the interface that change pen/brush properties or call other frames
 - Animate a series of images together into a gif using GIFEncoder()
- ❖ Python
 - Connect each frame's data to the SQL database
 - Manage login/registration

Code We'll Need

- ❖ Login and register page
- ❖ Drawing tools (brushes, pens, and shapes)
- ❖ CSS to add aesthetic appeal to buttons for different pen/brushes
- ❖ Storing the frames for each GIF with its respective owner in a database
- ❖ User sharing flipbooks

Databases

- ❖ User database

| UserID (int auto increment) | UserName (string must be unique) | Password (must be unique) |
|-----------------------------|----------------------------------|---------------------------|
| 0 | user | pass |

❖ Flipbook database

| ID (int auto increment) | Title (string) | UserName (string) | JSON of image data array |
|-------------------------|----------------|-------------------|--------------------------|
| 0 | Nyan cat | user | [...] |

Code We'll Want/Additions

- A more accessible means of accessing all the frames of the animation
 - Being able to scroll through them easily with ~10 panels shown at a time on the side of the screen
- A way to copy in a faint version of the another frame so the user can draw over it and use it as reference instead of editing a copy of the frame
- A means of users saving/favoriting flipbooks of other creators

Features Roadmap

Creating Flipbooks - users can

- draw on a canvas with different pen styles including
 - Free draw
 - Line
 - Shape
 - Paintbrush
- edit each frame of their flipbook as a separate canvas
- undo any actions on any frame
- Copy the previous frame of their animation

Editing Flipbooks - users can

- Copy the entire animation by another user
- Edit individual frames of any previously submitted flipbook and submit their edited work

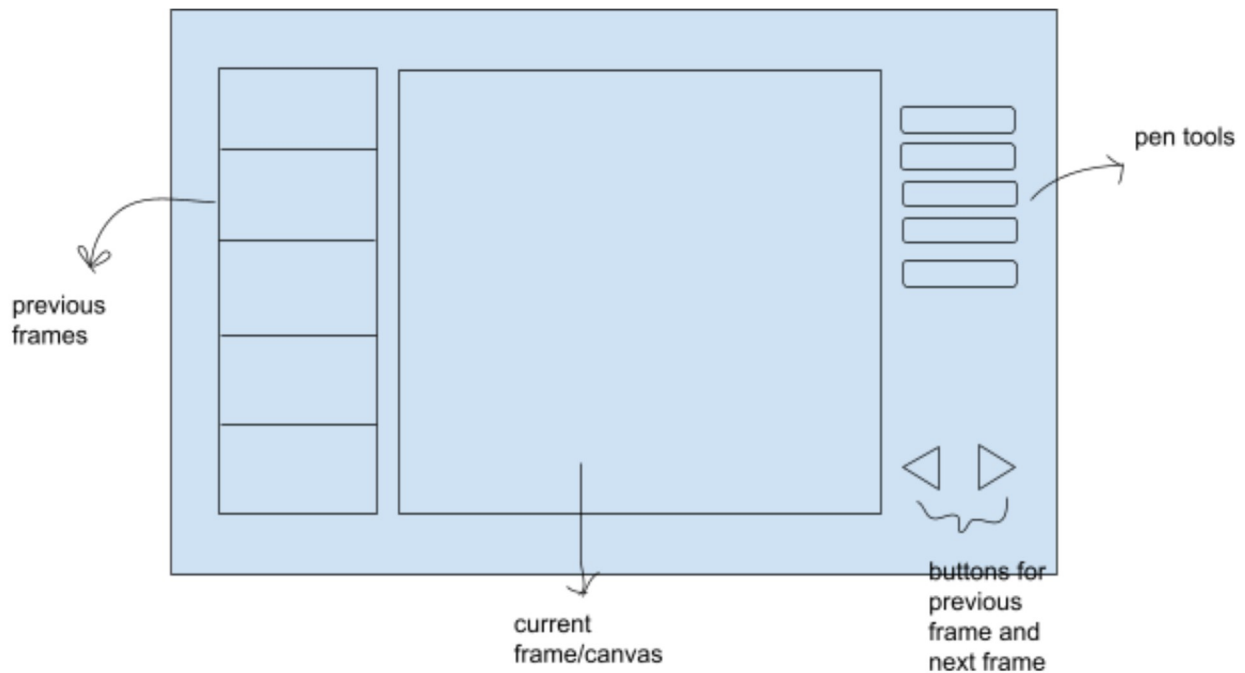
Viewing Flipbooks - users can

- View completed projects of other users as gifs through a gallery

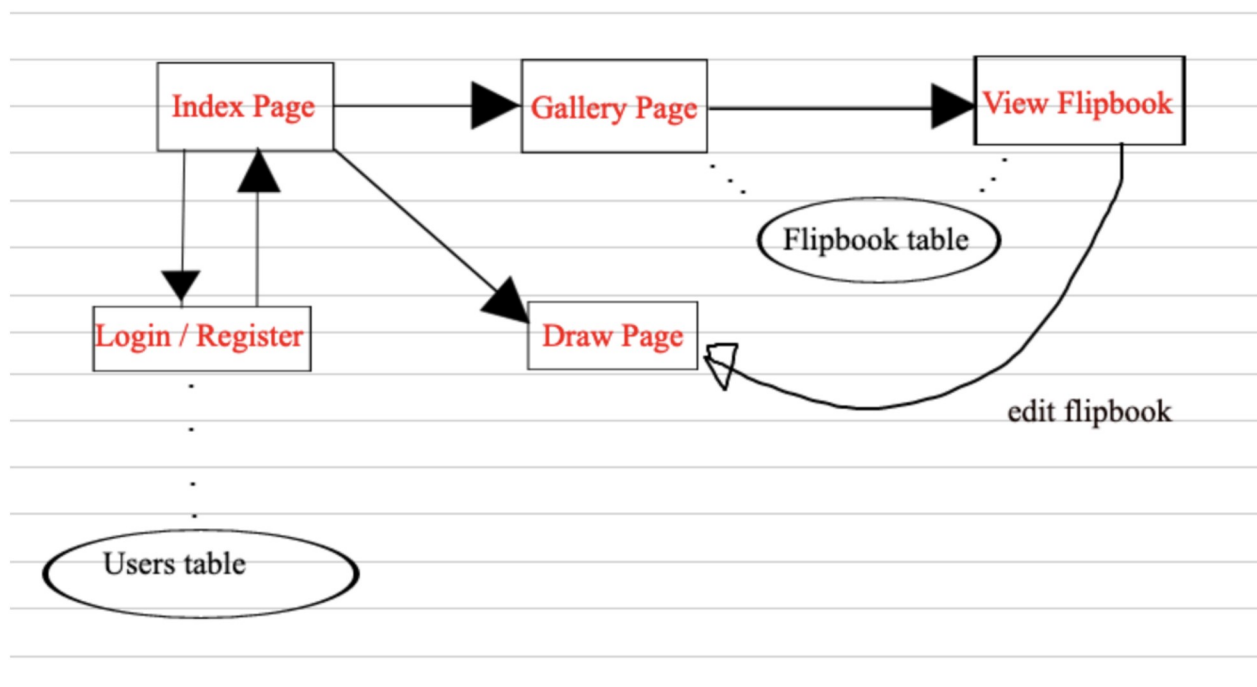
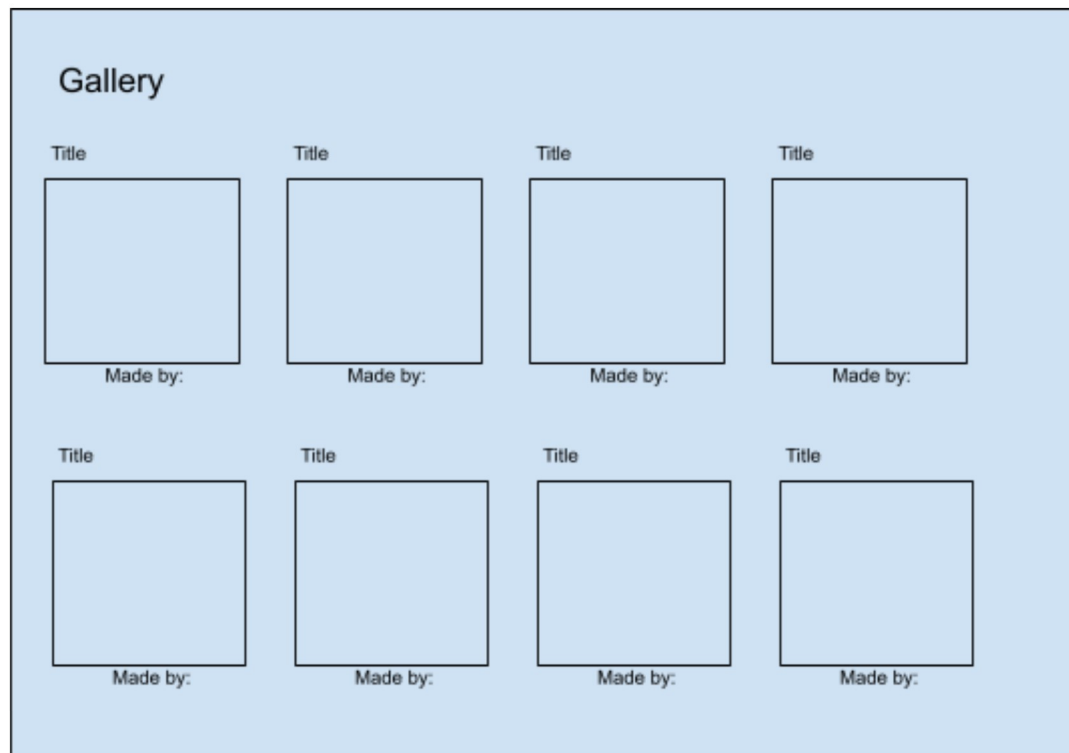
Sitemap (Frontend)

- Login/Register Page

- Allows user to sign up for an account
- Redirect to main page once logged in
- Main Page
 - Link to login/register if not logged in
 - If logged in, form to enter a title and start creating a new gif
- Drawing Page
 - Main canvas in the middle to draw current frame
 - Previous frames off to the side
 - Can use back and forward arrows to return to previous frame and edit them
 - Pressing forward on the newest frame makes a new blank frame
 - Pen tools next to canvas



- History Page
 - Lists the past GIFs that have been made to a user.
 - Chronological order
 - Users can go in and edit any past GIFs/frames
- Gallery Page
 - Users can see GIFs from other users
 - Can click on and edit



Allocation of Work

| Oscar | Naomi | Ishraqc | Shriya |
|---|---|--|--|
| <ul style="list-style-type: none"> ❖ Saving and loading frames ❖ Frontend drawing and editing mechanics ❖ Draw/edit page | <ul style="list-style-type: none"> ❖ Login/registration ❖ CSS ❖ Managing favorited/liked flipbooks | <ul style="list-style-type: none"> ❖ Working with databases for login/registrations and data of each frame for the GIFs | <ul style="list-style-type: none"> ❖ The different colors/sizes of brushes ❖ Eraser ❖ Undo button ❖ Page with flipbooks created by all users |

Expected Project Deadline: Mar 22, 2022