



P02 Design Document

Jayden Zhang, Margie Gao, Danny Huang, Suhana Kumar

**INSTABOOK**

**TARGET SHIP DATE: {2025-01-18}**

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## OVERVIEW

We are going to create a social media platform, similar to that of Instagram and Facebook. Users will be able to make posts, profiles, scroll through videos of other content creators and private message users they are friends with.

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## COMPONENTS

### Front End:

- Homepage.html: IF NOT LOGGED IN: Site Introduction. IF LOGGED IN: Shows the profile of the person.
- SignIn.html: Users will be able to either log in into their accounts through existing accounts found within the database or sign up, creating a new account within the database.
- Search.html: Users will be able to search for the accounts of other content creators.
- Reels.html: Users will be able to explore the reels created by other content creators.
  - This will be done by having an array of video objects that will have a “watched” or not “watched” property.
- Messages.html: Users will be able to privately message users that they are friends with.
- Profile.html: Users will be able to edit their profile and view the content that they have created.

### Back End:

- Instabook.db: Database that will store user accounts, reels, messages and friends.
- Instabook.js: Facilitates update of messages in pms
- \_\_init\_\_.py: Renders website through flask

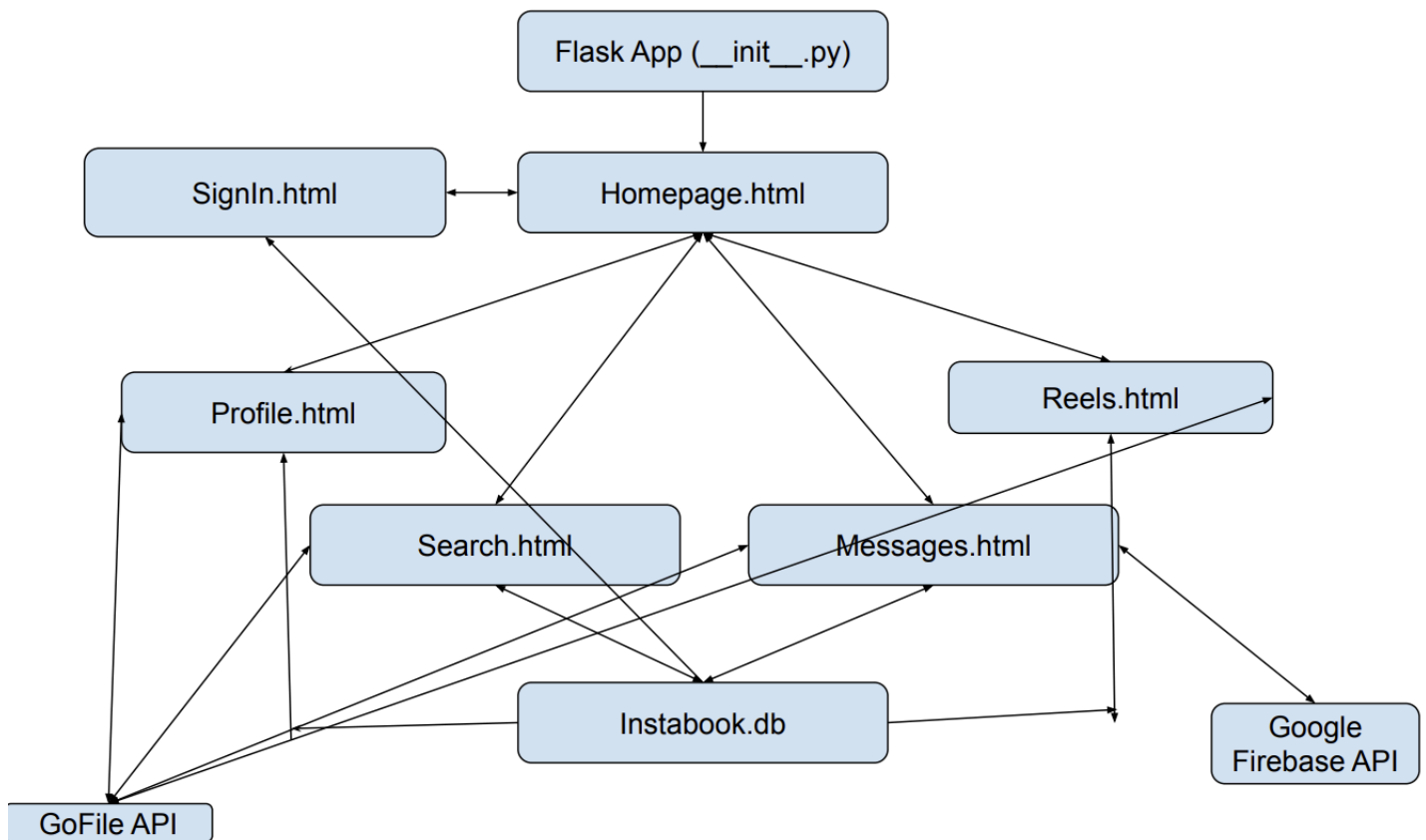
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## COMPONENT RELATIONSHIPS

- Various functionalities (search, reels, messages, profile) will be available within a side navbar which will allow users to switch between pages wherever they are within the site.
- All functionalities will be available after logging in.

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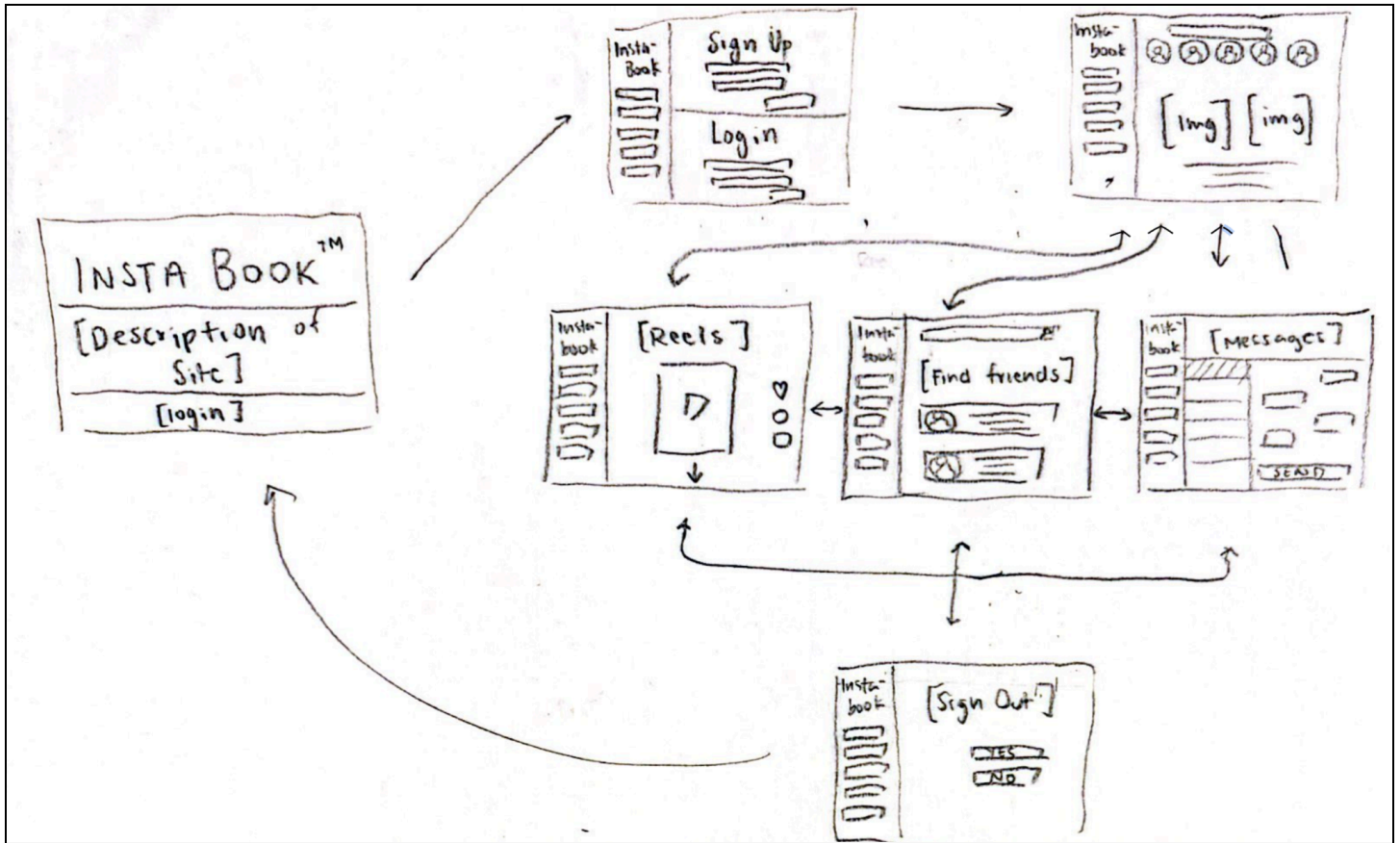
## COMPONENT RELATIONSHIP VISUALIZATION



- Users will arrive on the homepage, then be given the option to sign in/up
- Upon signing in/up, users will be redirected to the homepage
- From the homepage, they can navigate to the app's other functionalities, including the search page, reels page, messages page and profile page
- The search, reels, messages, profile and homepage pages **are all accessible to each other**

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## SITE MAP



## DATABASE

### users:

|          |          |     |
|----------|----------|-----|
| username | password | ID  |
| TEXT     | PYBYTE   | INT |

### [username]'s Friends / Followers:

|                    |
|--------------------|
| Friend / Followers |
| ARRAY of IDs       |

### [username]'s posts:

|              |       |
|--------------|-------|
| Post         | Video |
| IMAGE + TEXT | VIDEO |

[username]To[friend]:

|           |         |         |
|-----------|---------|---------|
| MessageID | Sent By | Content |
| INT       | ID      | TEXT    |

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## APIs

1. **GoFile API:** cloud storage platform used to store videos / photos that will be added to instabook. Free API for short-term storage which is what we will be using within our project. [uses API keys]
2. **Google Firebase API:** storage platform for retrieving and sending messages in the messaging feature for our app. [uses API keys as well]

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## FRONTEND FRAMEWORK: TAILWIND

- Utilize tailwind for buttons in user interface, toggle between light and dark mode, page sections, and prebuilt page designs.
- This will ensure consistent design throughout the entire website and create an appealing user experience.

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## TASK ASSIGNMENTS

| TASK   | Jayden Zhang | Margie Cao | Danny Huang | Suhana Kumar |
|--|--------------|------------|-------------|--------------|
| Setting up Python, SQLite3, and Tailwind environments. | X            | X          | X           | X            |
| User Authentication                                    | X            | X          | X           | X            |
| Front-end (HTML)                                       | X            | X          | X           | X            |
| Front-end (CSS + Tailwind)                             | X            | X          | X           | X            |
| DB Usage   | X            | X          | X           | X            |
| Final Testing and Bug Fixing                           | X            | X          | X           | X            |

|   |   |   |   |   |
|---|---|---|---|---|
| Reels                                   | X |   |   |   |
| Profile                                 |   | X |   |   |
| Messages                                |   |   | X |   |
| Search Feature + Login<br>Functionality |   |   |   | X |

**Note:** Our group decided to split the functionality of the project instead of the individual languages as we had learned that it was very inefficient and ineffective to do so.