## System Components <Milestone 3: System Implementation>

### Component [User]

The user component is the heart of this project. It is the component that allows the actual user to interact with everything and every aspect of the project relies on it. The main methods of the user component is user creation, user following, user modification, user deletion, and user authentication. Using these methods we can have a fully interactable user object.

Diagram

Description automatically generated

### Component [Post]

The post component is what allows users to express themselves on this project. It allows the actual user to post their thoughts and interact with it through likes and dislikes. The main methods of the post component is post creation, post liking, post modification, post deletion, and post authentication. Using these methods we can have a fully interactable post object.

Diagram

Description automatically generated

### Component [Chat]

The chat component allows friends to message each other. Through the use of Socket.io friends are capable of seeing when each other are online. This component allows seamless communication between users by using the following methods. The main methods of the chat component is chat creation, messaging, find chat, chat authentication, and find online friends.

Diagram

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### Component [Frontend]

The frontend component is what the users actually see when they launch the project. It is what provides the visual cues and the interactivity of the website that users will use for all their actions. This component begins by making a decision as to whether the user is on the home page or the profile page. Then from there is generates the rest of the page which consists of a top bar, right bar, left bar, and feed. The feed also has subcomponents which are the share box and the posts that users have posted.

Diagram

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## Design Pattern <Milestone 3: System Implementation>

We used the builder design pattern for this project. Whenever a user creates a new account using whatever credentials that they want, the application creates a new user object which is saved in the database and can be used whenever someone logs into that account.

Diagram

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## Design Pattern <Milestone 3: System Implementation>

We also used the factory design pattern for this project. Every user has a different webpage constructed based on their specific profile and who they follow. For example, their feed will look different depending on who they follow, and their profile page will look different depending on how they customize it.

Diagram

Description automatically generated

### System Implementation Milestone #2: Architecture & Milestone #3: System Implementation

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Activity** | **Pre #** | **Estimated**  **Effort** | **Actual**  **Effort** | **Estimated**  **Start Date** | **Estimated**  **Finish Date** | **Actual**  **Start Date** | **Actual**  **Finish Date** |
| 1 | Delegate tasks between the group | 0 | 1 | 1 | 2/23/2022 | 2/23/2022 | 2/23/2022 | 2/23/2022 |
| 2 | Work on developing the backend of the project | 1 | 15 | 20 | 2/24/2022 | 3/2/2022 | 2/24/2022 | 3/5/2022 |
| 3 | Work on developing the frontend of the project | 2 | 15 | 25 | 3/3/2022 | 3/10/2022 | 3/5/2022 | 3/12/2022 |
| 4 | Work on fleshing out all the core features | 3 | 10 | 10 | 3/11/2022 | 3/18/2022 | 3/13/2022 | 3/20/2022 |
| 5 | Work on the viable features of the project | 4 | 10 | 15 | 3/19/2022 | 3/25/2022 | 3/21/2022 | 3/28/2022 |
| 6 | Work on the stretch features of the project | 5 | 15 | 5 | 3/26/2022 | 4/3/2022 | 3/29/2022 | 4/4/2022 |
| 7 | Fill out the project milestone template to finalize submission | 6 | 3 | 2 | 4/4/2022 | 4/7/2022 | 4/5/2022 | 4/7/2022 |