

# Feature/Icon request interface for EOS-Icons [Front-end and UX].

Org - Python Software Foundation

Sub org - EOS Design System

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## Motivation

Now that I've decided to pursue my career in the Software domain, I want to learn how a Software is actually built; how so many people are able to work together and collaborate, and how to quickly and efficiently write production level code.

As of now, I've worked only on small projects, with small teams focussing on one technology at a time, so this will be a completely new experience for me and I hope to learn a lot of new things.

Mentors: [Cynthia Sanchez](#), [Sorin Curescu](#), [Kartikay Bhutani](#), [Abhinandan Sharma](#), [Jesus Herman](#)

## Synopsis

I am going to create a web interface for the EOS community where users will be able to request for new icons (and possibly features) in an elegant and interactive manner. I think the EOS team will like this project because the existing way to do this job is not very user friendly, because of which they are possibly missing out on good ideas from people around the globe. This web interface can potentially help them reach a wider audience. I have worked on UI projects in the past, so I know how time taking and repetitive it can become. I've spent several hours on a single component to make sure it looks perfect. I'll work with the same determination on this project as well.

The fact is, I like web development and want to pursue a career in the same field, so I have a constant motivation to learn new things in this direction. Also, I'm one of those people who likes getting things done on time. I hate delaying work. You can be rest assured, I'll try my best to never miss a deadline and complete this project on time with all the requirements.

## EOS - Design System

EOS is a community based open source project for building a customizable Design System that can help open source organizations, SMEs and others deliver outstanding user interfaces and consistent user experience across-products.

## Project Background

The EOS team is looking for a way to make it easier for users to be able to request new ICONS into EOS. Currently, users have to go and create an issue in their Gitlab repository, which is not a very elegant and user friendly way.

## Proposed Idea and Project Goal

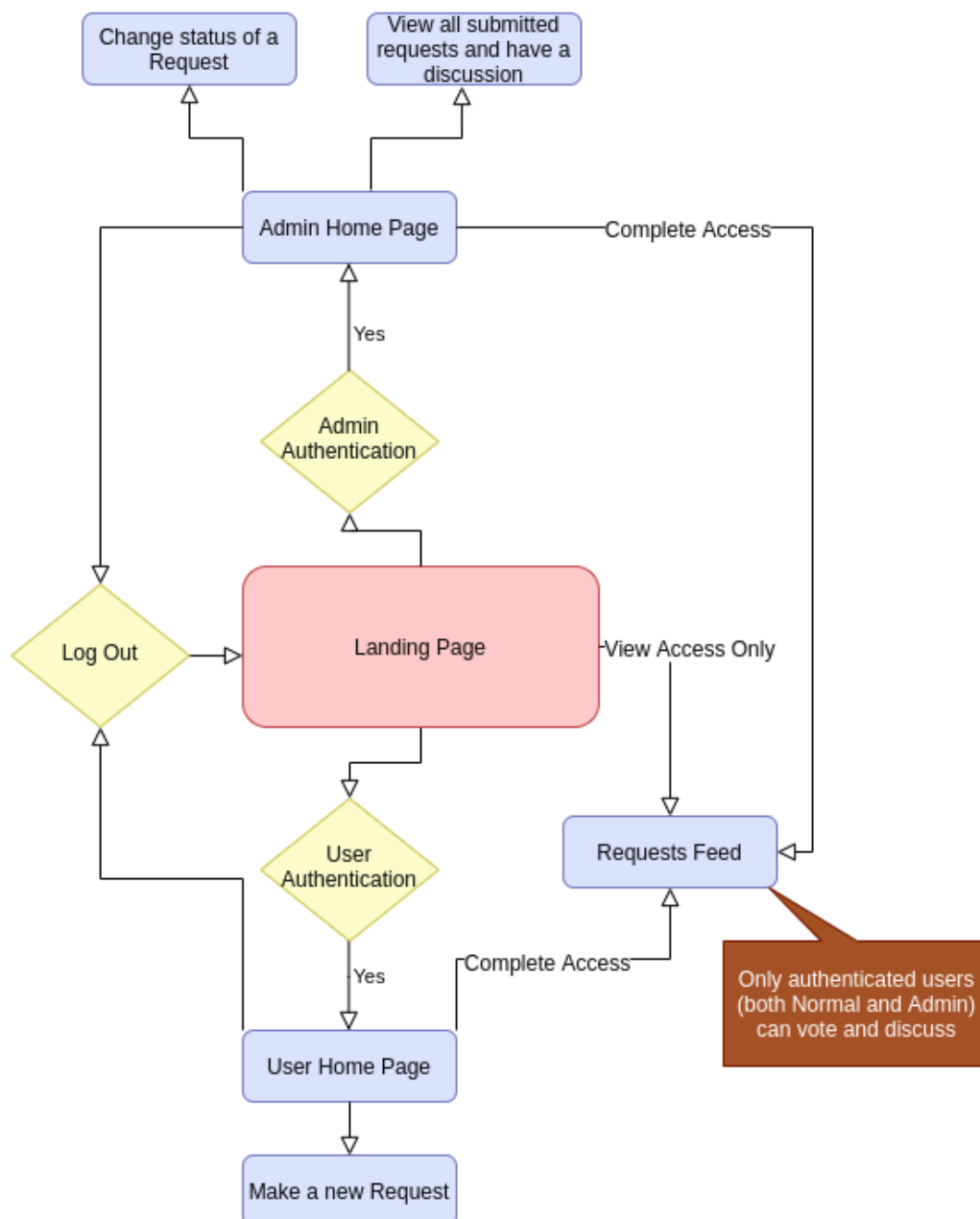
- The Idea is to create a web interface and incorporate it into the existing EOS website where a user will have the ability to request for new icons (or possibly features) after signing up.
- To ensure that the community has a way to contact each user, every user will have to provide a valid email-id while signing up. Other than email-id, users can provide their Gitlab and/or Github handle, Phone number, Linkedin profile, etc. Will confirm which ones to use with the mentor.
- Users will also have the option to look at requests from other users of the community as a part of their feed. They will be able to vote for a request and/or have a discussion on it.
- Discussions will be comments based, where a user can reply to other users and form a thread.
- Non-authenticated users will be allowed to see the feed but they will not be able to interact with it (vote/comment).
- There will also be a few designated users with admin access. They will be able to do everything that a normal user does plus have additional rights.
- Additional admin rights can possibly include:
  - Ability to view the submitted requests, review them, have a discussion on them with other administrators and choose whether a particular request will be published for the community or not.
  - Change status of a request. Here, status can follow below sequence:  
*Submitted→Under Review→Published→Under Community Review→ Rejected/Accepted*
- A **state** will determine whether a user is authenticated or not. It will also tell us whether the given user is an administrator or a normal user.

## Proposed Technology Stack

- Since this Project mainly involves building of the Frontend / UI-UX for the said web interface, I plan to use **ReactJS** as the tool.

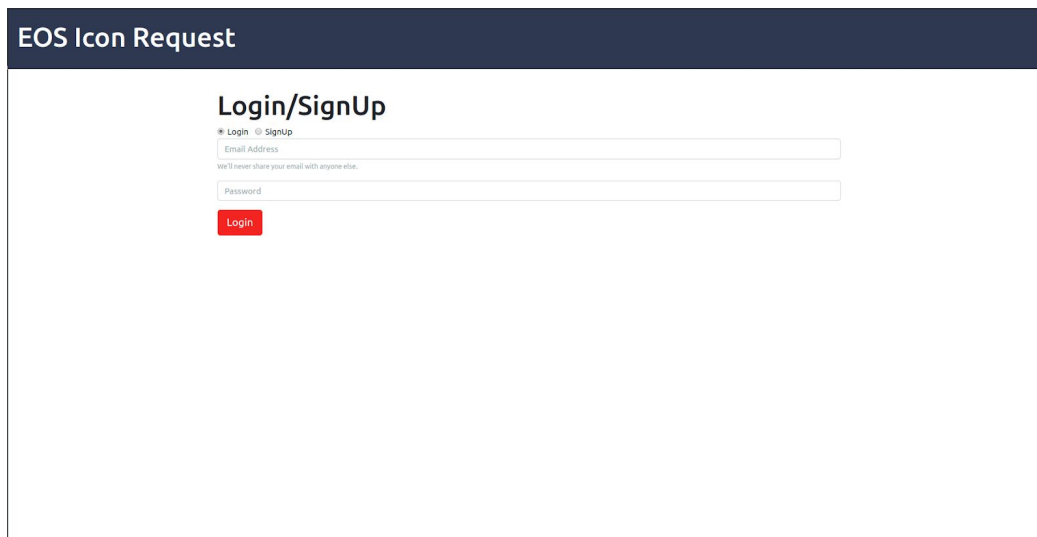
- The reason I've chosen **React JS** is because I'm familiar with function components in React and also I'm well versed with **Context** and **React Hooks** to achieve a seamless functionality in a web application.
- For styling I plan to use **SCSS** and write it myself for all individual components. I'll use **SCSS** over conventional **CSS** because it allows features like variables, nestings, inheritance etc, which helps in writing concise and distributed code.

## Sample Project Pipeline

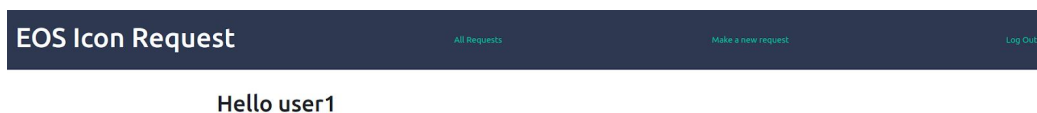


## Workdone and Research <Link: [Frontend](#), [Backend](#), [Demo](#)>

- As discussed with the mentors, one possibility for the backend is to use [Strapi CMS](#), so I tried working with it and have successfully created a small Web Application ([Frontend](#), [Backend](#)) with a few functionalities.
- Prototype Login/Signup Page



- Prototype User Homepage



- Strapi requires an instance of MongoDB for running. Here I am running a locally hosted version for the backend. For the project, the backend will be hosted online. One possibility for hosting is to use Heroku. It also provides free addons that can be used for the MongoDB requirement.

- Authentication State Management:
  - I'm maintaining the state of the application (authenticated/not authenticated) by using a parent context which can be accessed from all the subsequent pages. I've used `useReducer` to update this state.
  - Using `useReducer` over `useState` because state change is needed to be performed non-locally. `useState` is better suited when states are changed locally to a component.
  - Our state will also tell us whether an authenticated user is a normal user or an admin.
- API Calls and Backend:
  - For the purpose of Login I used a `Strapi` API to send a POST request consisting of an identifier and a password for authentication. On successful authentication, a `JWT` token is returned.
  - For the purpose of Signing Up I used a `Strapi` API to send a POST request consisting of Email, Username and Password (for now, can be extended). On successful authentication, a `JWT` token is returned.
  - As discussed, enabling `CORS` in the `Strapi` backend will help us achieve the required security for the application.
  - I'll be using `Axios` for communicating with the server. It is a client HTTP API based on the `XMLHttpRequest` interface provided by browsers. Advantages of using `Axios` over `Fetch`:
    - Responses and requests can be intercepted.
    - It has a streamline error handling mechanism.
    - It has the ability to cancel requests.
    - Support for upload progress.
  - APIs for different request related to authentication:
    - Registration

```
axios
  .post('http://localhost:1337/auth/local/register', {
    username: 'Strapi user',
    email: 'user@strapi.io',
    password: 'strapiPassword',
  })
```

- Login

```
axios
  .post('http://localhost:1337/auth/local', {
    identifier: 'user@strapi.io',
    password: 'strapiPassword',
  })
```

- Forgot Password

```
axios
  .post('http://localhost:1337/auth/forgot-password', {
    email: 'user@strapi.io',
  })
```

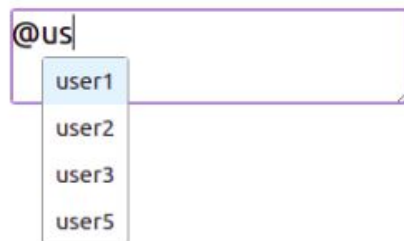
- Email Validation

```
axios
  .post('http://localhost:1337/auth/send-email-confirmation', {
    email: 'user@strapi.io',
  })
```

- Password Reset

```
axios
  .post('http://localhost:1337/auth/reset-password', {
    code: 'privateCode',
    password: 'myNewPassword',
    passwordConfirmation: 'myNewPassword',
  })
```

- <http://localhost:1337> will be replaced by the server address.\*
- Comments and Discussions:
  - I'll be implementing "mentions" enabled discussion forum. For "mentions", I looked up [rc-mentions](#). I was able to incorporate such a feature in my prototype.
  - I've added a minimal textArea in the prototype. As of now, you can mention any of the registered users (using "@" as a trigger).
  - I am working on what is the best method to store these comments in the database. Will talk with the backend intern about the same if I get selected.



- User Interface:
  - I went through other platforms that offer a similar interface and have come up with a sample version of my own. I have attached a few screenshots under the "Proposed UI" heading.
  - I'm keeping simplicity and elegance as the primary goal for this web interface.

- Prototype - All Requests Page

EOS Icon Request

All Requests

Make a new request

Log Out

+ 20 - 5

Author: user5

Title1 LoremIpsum

+ 10 - 10

Author: user1

Title 2 Lorem Ipsum 2

+ 11 - 22

Author: user2

Title 3 Lorem Ipsum

+ 22 - 2

Author: user3

Title 4 Lorem Ipsum 44

+ -

Author: user1

sample titttle1

+ -

Author: user1

adasd

+ -

Author: user1

asdasdsadasdasdasd

+ 0 - 0

Author: user1

adsadsdsdsdsds

+ 0 - 0

Author: user1

Sample Title Of the century

+ 0 - 0

Author: aashnajena

sadasdsadsadas

localhost:3000/requests/2

- Prototype - New Request Page

EOS Icon Request

All Requests

Make a new request

Log Out

Title

Enter Title

Description

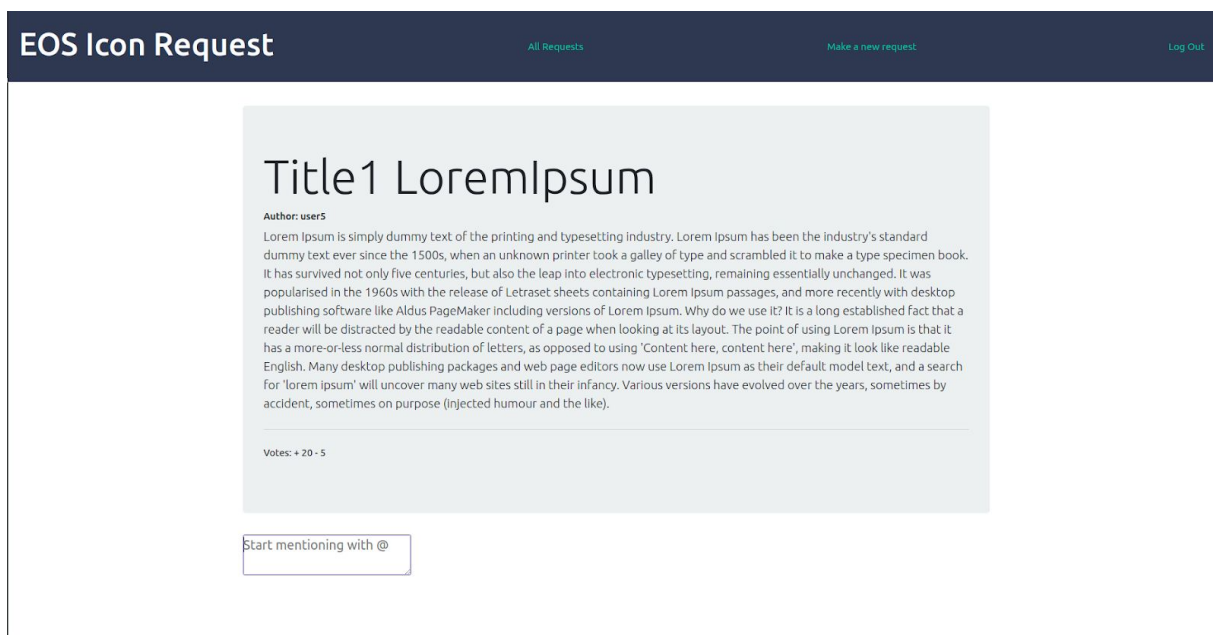
Author

user1

Submit



- Prototype - Page for every request

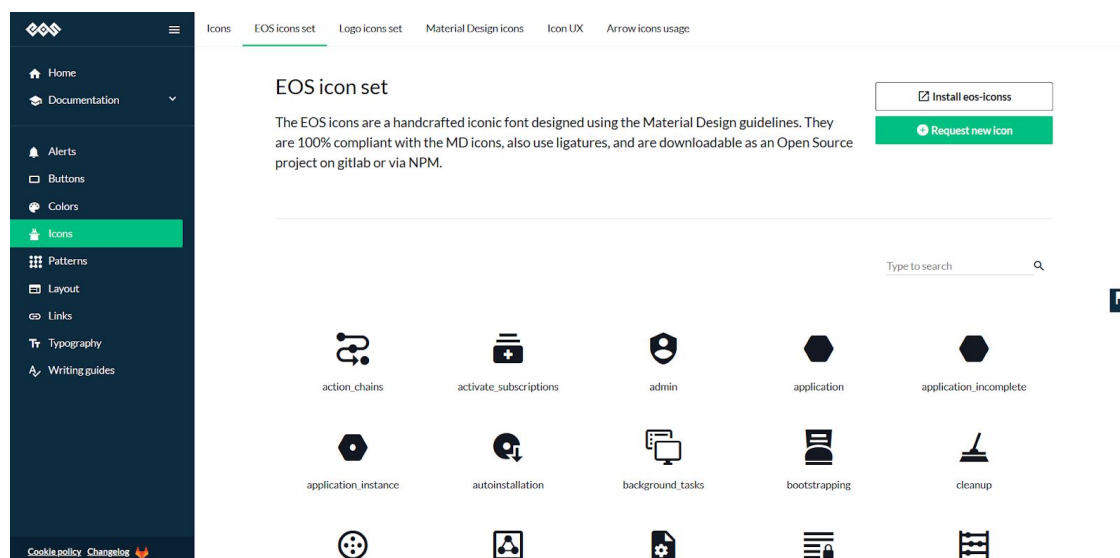


## Proposed UI

<Link: [Sample UI](#)>


### Current Interface

On click of the "Request new icon" button, the user is redirected to the Gitlab repo and asked to create an issue for their request.



## Sample User Homepage

This is a very simple example of what the homepage can look like. Non-authenticated users will be able to look at requests made by other users and view details about them.

 Login/SignUp


### Welcome to EOS Icons

Look at what's going on in our community

Categories

Title	Status	Votes	Threads
Title 1	Submitted	20  100	18
Title 2	Under Review	23  123	20
Title 3	Published	33  122	22
Title 4	Community Review	31  90	18
Title 5	Rejected	5  132	22
Title 6	Accepted	15  140	33
Title 7	Accepted	19  111	18

## Sample Admin Homepage

 Hello Admin!

### Welcome to EOS Icons


Look at what's going on in our community

Categories

[My Icons](#) [Request a new Icon](#) [Go to Admin panel](#)

Title	Status	Votes	Threads
Title 1	Submitted	20  100	18
Title 2	Under Review	23  123	20
Title 3	Published	33  122	22
Title 4	Community Review	31  90	18
Title 5	Rejected	5  132	22
Title 6	Accepted	15  140	33
Title 7	Accepted	19  111	18

## Sample Dropdown















 Login/SignUp

### Welcome to EOS Icons


Look at what's going on in our community

Categories

Latest  
Trending  
Most viewed

	Status	Votes	Threads
	Submitted	20  100	18 
Title 2	Under Review	23  123	20 
Title 3	Published	33  122	22 
Title 4	Community Review	31  90	18 
Title 5	Rejected	5  132	22 
Title 6	Accepted	15  140	33 
Title 7	Accepted	19  111	18 

## Sample Authentication (Login)















 Login/SignUp

### Welcome to EOS Icons

Look at what's going on in our community

Categories

Title

Title 1		20  100	18 
Title 2		23  123	20 
Title 3		33  122	22 
Title 4		31  90	18 
Title 5	Rejected	5  132	22 
Title 6	Accepted	15  140	33 
Title 7	Accepted	19  111	18 

USERNAME

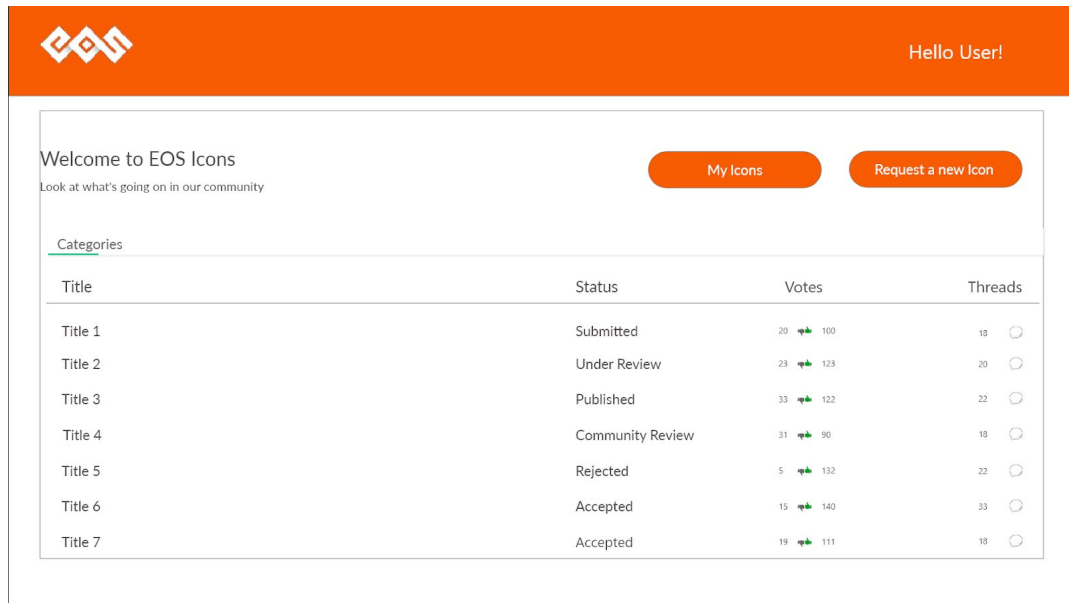
PASSWORD

SIGN IN

SIGN UP

## Sample User Homepage

The user can view his requests through the “My Icons” button and request a new icon using “Request a new Icon” button.

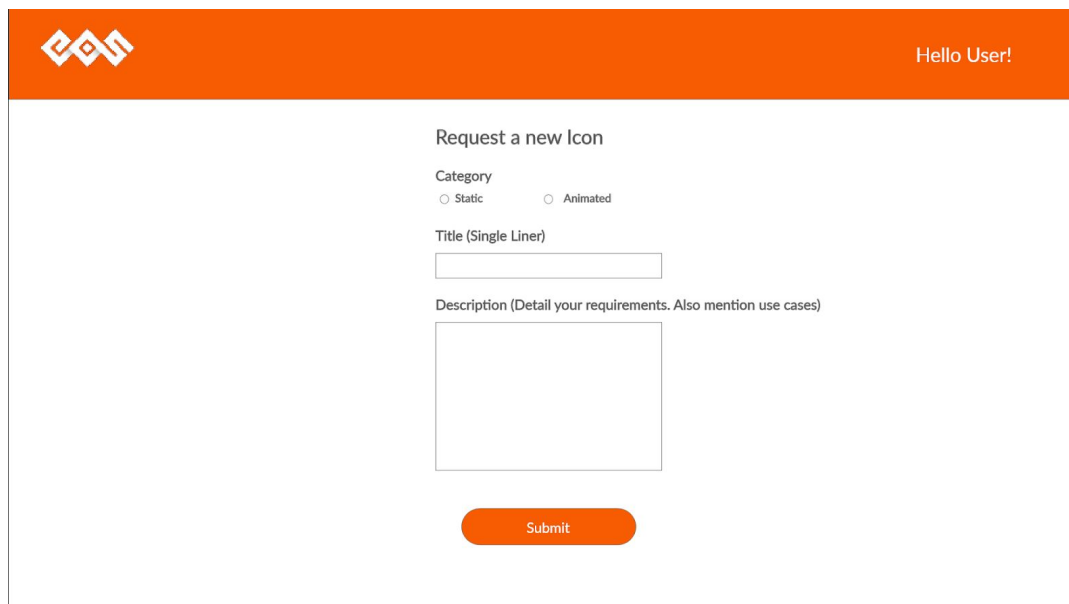


The mockup shows a user homepage for 'EOS Icons'. It features an orange header with the EOS logo and a 'Hello User!' greeting. Below the header, there's a 'Welcome to EOS Icons' section with a sub-header 'Look at what's going on in our community'. To the right of this section are two orange buttons: 'My Icons' and 'Request a new Icon'. Below the welcome section is a 'Categories' link and a table listing various icon requests.

Title	Status	Votes	Threads
Title 1	Submitted	20   100	18
Title 2	Under Review	23   123	20
Title 3	Published	33   122	22
Title 4	Community Review	31   90	18
Title 5	Rejected	5   132	22
Title 6	Accepted	15   140	33
Title 7	Accepted	19   111	18

## Sample New Request Page

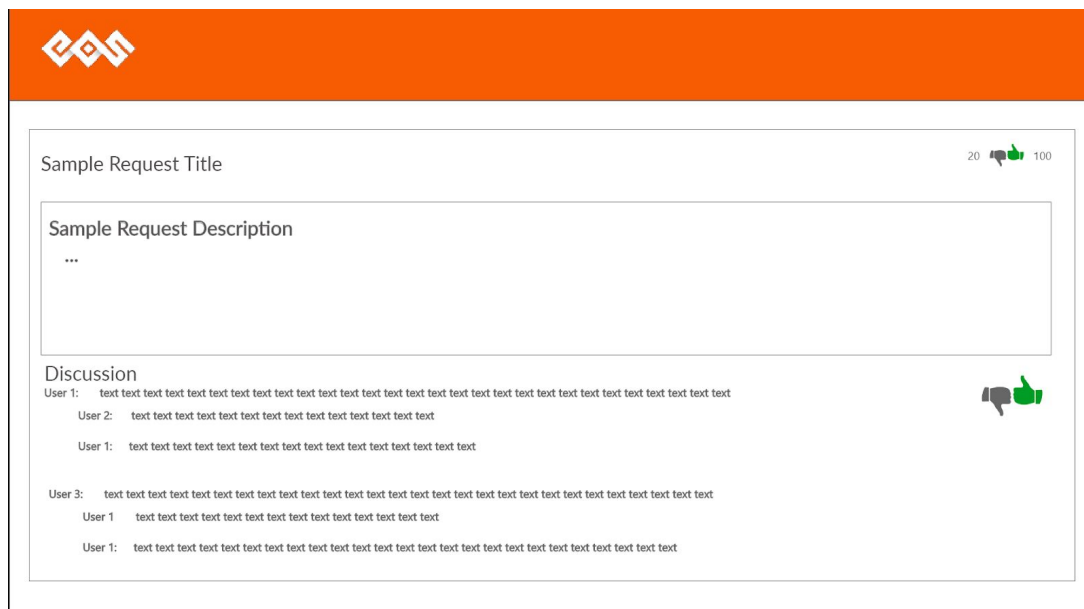
Users can request for a new Icon using the following form.



The mockup shows a 'Request a new Icon' form. It features an orange header with the EOS logo and a 'Hello User!' greeting. The form is titled 'Request a new Icon' and includes a 'Category' section with radio buttons for 'Static' and 'Animated'. Below this is a 'Title (Single Liner)' text input field. The 'Description (Detail your requirements. Also mention use cases)' section has a larger text area. At the bottom of the form is an orange 'Submit' button.

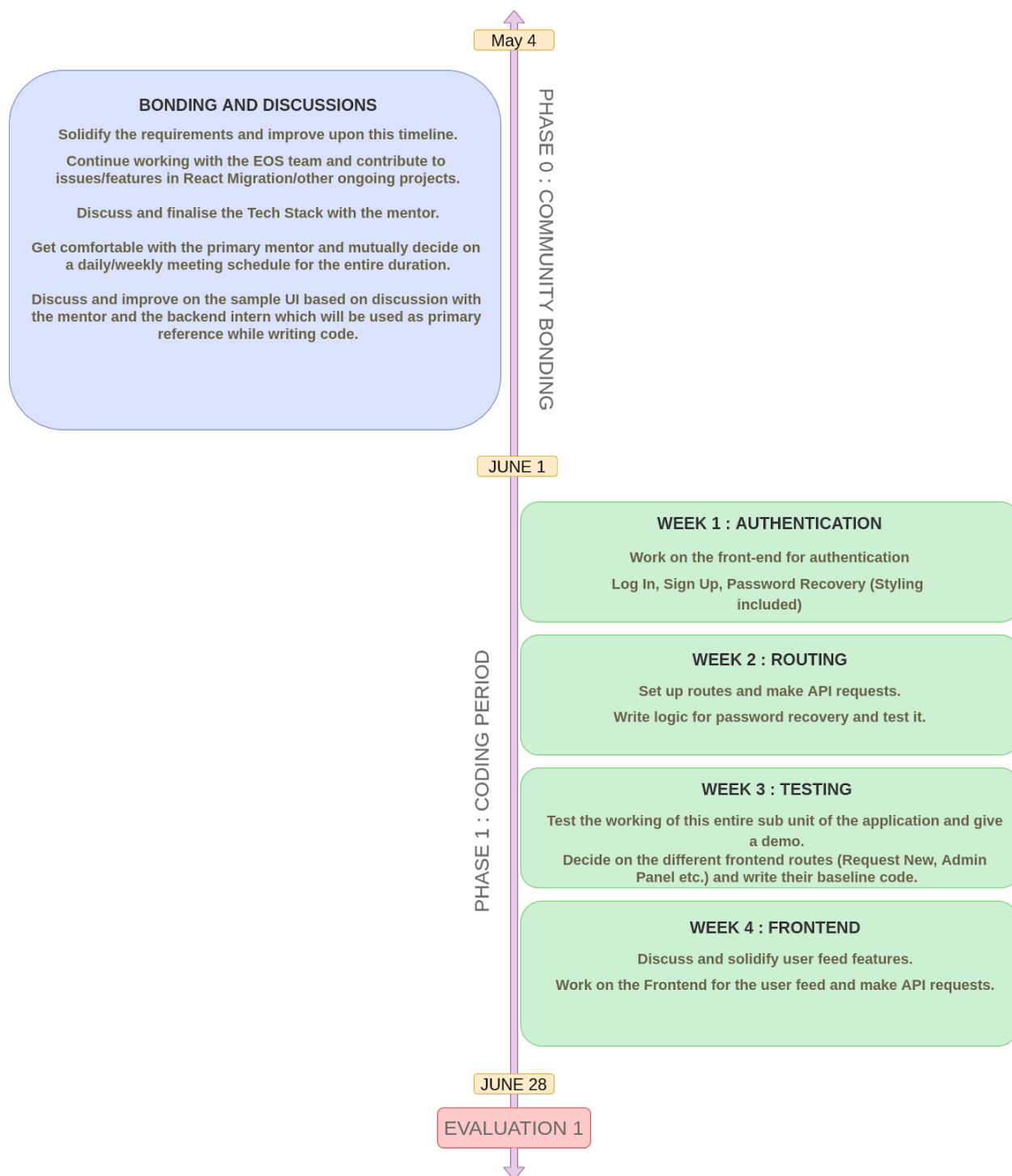
## Sample Request Page

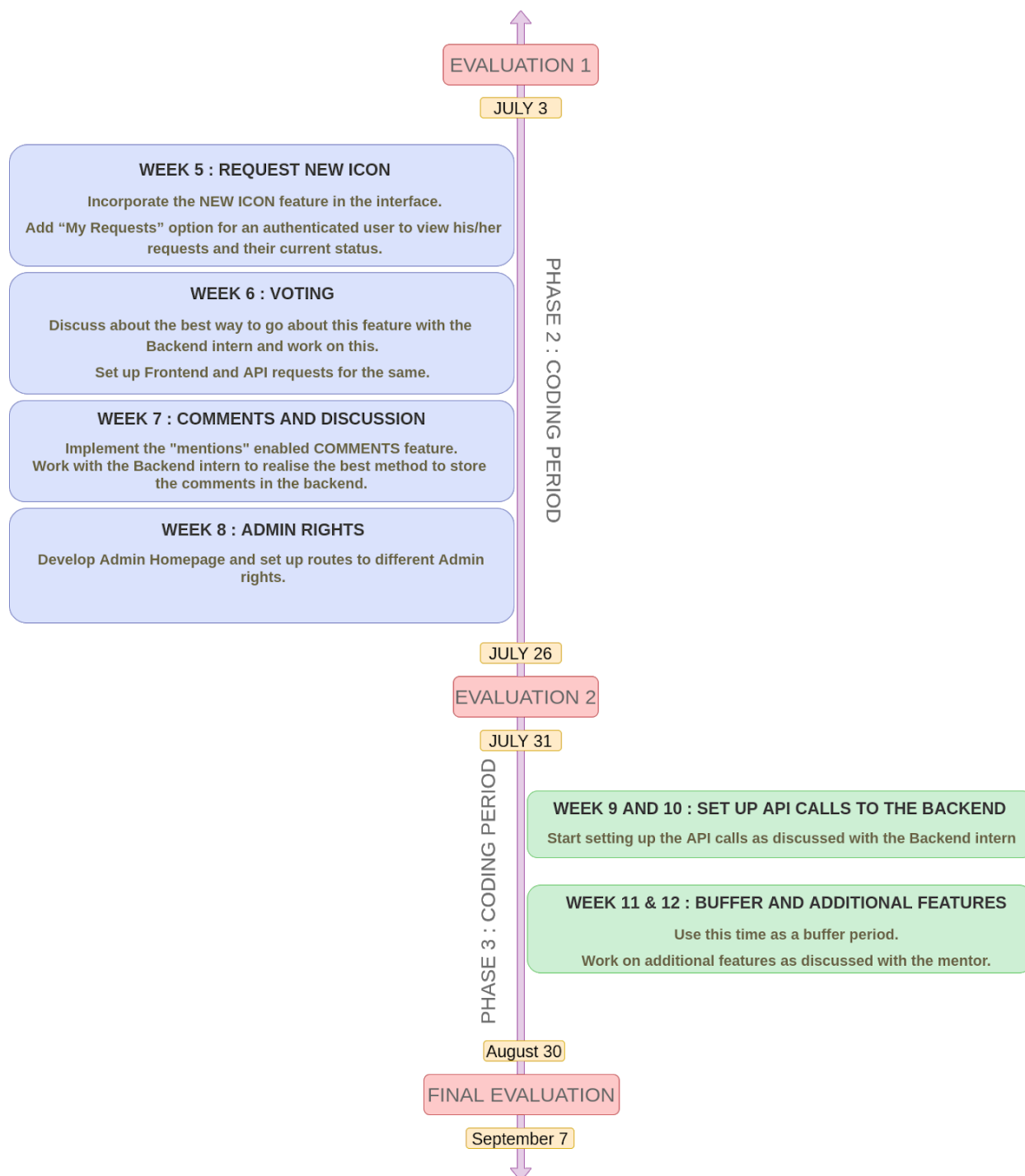
How an individual request will look to a user.



- Will add/work on more sample pages based on mentor feedback.

## Timeline





## About me

I am a junior at International Institute of Information Technology, Hyderabad pursuing Bachelor's degree focussed in Computer Science and Engineering. I'll be completing this degree by April 2021.

I love outdoor sports and try my best to take part in all outdoor activities in my college. This also means that I get injured a lot, but it is all part of the fun. Particularly, I love long distance running and playing Football. I play as a Central Midfielder primarily. I am a Real Madrid and CR7 person.

I also indulge in a bit of Computer and Mobile Gaming in my free time. Counter Strike tops my list of competitive games. I want to travel around Europe before I turn 25, so if I get selected and successfully complete this program then I'll save my earnings for such a trip.

Talking about PSF and EOS, I chose PSF because I thought it would be good for my profile as a web developer if I am associated with Python Software Foundation. I chose EOS specifically because I found the community quite approachable (thanks to Slack). Also, I liked the fact that I'll be working with React as a part of this GSoC project. I want to get well versed with this framework and I think this project will help me do that.

## Work Experience

- My Resume <[Resume](#)>
- Currently, I am working as a R&D Intern at Indian School of Business, Hyderabad. My work here involves web scraping, web development and data analysis. I like to keep myself busy, so I often take up projects like these. I work remotely, with flexible timings and a flexible contract. If I am selected for GSoC, I will withdraw myself from this project.
- Before this, I was working for Virtual Labs, India for about a year. I was initially an individual contributor there and then worked as a Product Development Intern with 15 junior interns reporting to me. My work there revolved around web development using Vanilla Javascript (and a few custom libraries for visualisations). There, I learned about effectively using version control and the difference between writing code for college assignments and writing production level code. I was also responsible for the work done by the 15 interns under me. I reviewed their codes and was responsible to make sure that they follow and complete their milestones on time.



## Open Source Contributions

I developed a knack for web-development over last summer; so I tried learning new things and came to know about how open source coding works. A friend of mine introduced me to the world of open source. I initially made a few contributions in Gnome and then I started working in EOS-Design.

- EOS-Design System
  - [All Merge Requests \(Open/Closed/Merged\)](#)
  - [All issues created](#)
- Gnome
  - [https://gitlab.gnome.org/GNOME/epiphany/-/merge\\_requests/540](https://gitlab.gnome.org/GNOME/epiphany/-/merge_requests/540)
  - [https://gitlab.gnome.org/GNOME/gnome-maps/-/merge\\_requests/73](https://gitlab.gnome.org/GNOME/gnome-maps/-/merge_requests/73)
  - [https://gitlab.gnome.org/GNOME/gnome-maps/-/merge\\_requests/68](https://gitlab.gnome.org/GNOME/gnome-maps/-/merge_requests/68)

As a part of my year long internship at Virtual Labs, India I worked on building an educational platform. The aim of Virtual Labs, India is to build a platform to be used across all colleges in India. Me and my partner developed two experiments in the Data Structures module from scratch. **These will be made open source when the entire platform is built.** If you want to take a look at my work, you can look in the Commit histories.

- [Bubble Sort](#) (Link to [Demo](#))
- [Selection Sort](#) (Link to [Demo](#))

## Commitments during GSoC period

As already mentioned above, if I get selected then I'll withdraw myself from my project at the Indian School of Business. I'll be available full time and hence will be able to devote at least 30-35 hours a week.

As of now, I don't have any other commitments during the GSoC period. If something does come up, I'll discuss it with my mentor. In any case, I am used to working when I'm travelling so the number of workless-days will be absolutely minimal.

THANK YOU FOR READING

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