CONTENTS

ABSTRACT

Procrate is an attractive, easy, convenient and thoughtfully created project sharing platform, build for students, faculty or enthusiast, where they can upload and share the projects and ideas conveniently. Procrate is sharing projects and ideas, asking questions/doubts, searching for projects, reading and writing blogs, following other users and much more. Procrate is equipped with HASHTAG feature which optimizes the Recommendation and Search functions to meet users' requirements as per his/her profile or preference.

User's rank is decided on XP i.e. Reward Points on access of multiple features of the Procrate the User will keep on earning the Reward Point, providing User a motivation to explore the Procrate frequently. An algorithm like PageRank algorithm ensures the quality Project/Idea gets proper exposure. It ranks the Project based on number of upvotes it gets considering its quality and amount of upvotes. i.e. a user with higher 'User Rank' upvotes any other users project, that upvoted projects 'Project Rank' will be scaled up according to Upvoters 'User Rank'. This functionality helps to get optimum search results and Recommendations.

LIST OF FIGURES

1. INTRODUCTION

Procrate, is an online project sharing website. Students will be able to Upload, Download and Review the projects on the website. The students as well as faculty can login in the system. Firstly, the requirements were identified which can be classified as user requirements and functional requirements.

User Requirements:

A) Students:
1. Common interdisciplinary project sharing platform at institute level.
2. Personal space to upload and work on project.
3. Customizable search option.
4. Comments Section for each project.
5. Upvote/ downvote option for projects.
6. Request download of project reports.
7. "Ask for help" forum.
8. Private chat box.
9. Pull request to provide any suggestion.
10. Accessibility to read and write blogs, relating to a project that is uploaded, also about any idea.
11. Accessibility to follow any user registered on Procrate.

B) Teachers:
1. Plagiarism checker.
2. Report the project.

Functional Requirements:

1. Login.
2. Signup.
3. Add personal details.
4. Create project.
5. Add branch.
6. Comment.
7. Search.
8. Upvote/Downvote.
9. Check Plagiarism.

1.1 Motivation

While working on mini projects in first year of our engineering, we encountered some problems. Some of these problems were faced by almost all the students. We found out that the main problems were that there were not enough references, lack of technical knowledge and experience, no enough technical help and the most important problem was that we observed repetition in the topic selection of the projects. And in some of the projects, plagiarism was seen. In most of the cases, teachers cannot check whether the project is copied or not.

Hence, we thought of this concept which will enable students to see the existing projects that can not only help them to find a new one, but the incomplete projects or the projects having some future scope could be useful for them to work on. This will assist in reducing the plagiarism as well.

1.2 Objectives and Scope

The primary objective is to provide a common institute level interdisciplinary platform for sharing of project/code with other students or faculty of the institute.

To provide the facility to register as a new or old user, share or upload your project and write a blog about your project.

To give the accessibility to follow any user, like and comment on a blog or a project or any idea, read blogs, download any project on the uploader's approval, contact the other user, etc.

To facilitate the users with a Help forum so they can ask and answer the queries.

1.3 Problem Statement

To provide a common institute level interdisciplinary platform for sharing of project/code with other students or faculty of the institute.

2. LITERATURE SURVEY

We studied various platforms that are similar to our project. They are much larger platforms. The platforms we identified are: GitHub, ResearchGate, Quora, etc. where we studied the first two in much detail.

The feasibility study done for GitHub is as follows:

- GitHub is a web-based hosting service for version control of git.
- Used mostly to share computer codes.
- Used as repository of source codes.
- User can contribute content on site, but Public Repository can be browsed and downloaded by anyone.
- In addition to source code they support like - Documentation, Pull request, Follow user features.

The feasibility study done for ResearchGate is as follows:

- It is one of the largest professional networks for scientists equipped with a personal profile and with key feature to share Research papers.
- The profile provides Personal Publications, patents, journal articles, conference proceedings.
- The User have feature of Personal blog.
- The Research gate have Newsfeed generated based on users' connections and interest.

3. SYSTEM DESIGN

3.1. Hardware Requirements:

The project is software based wherein we are creating a website. Hence the hardware requirements aren't much except for a computer with internet connectivity, server, etc.

3.2. Software Requirements:

The system is divided into two parts: server side and the client side.

The server side includes the web framework, the backend language, and the database. The client side includes the frontend designing and the website.

Server Side:

Web Framework: Django 2 is frameworks MVC (Model-View-Controller) architecture helps to build proper well-structured web application.
Backend language: Python 3.x has many libraries expands the functional scope of web application.
Database: MySQL is one of the supported open-source databases of Django.

Client Side:

Frontend Language: HTML 5 is latest version available and supported by Django for content display. CSS 3 is used to enhance and beautify the user interface JavaScript brings dynamicity to our page.

The dependencies and the best features of the project are as follows:
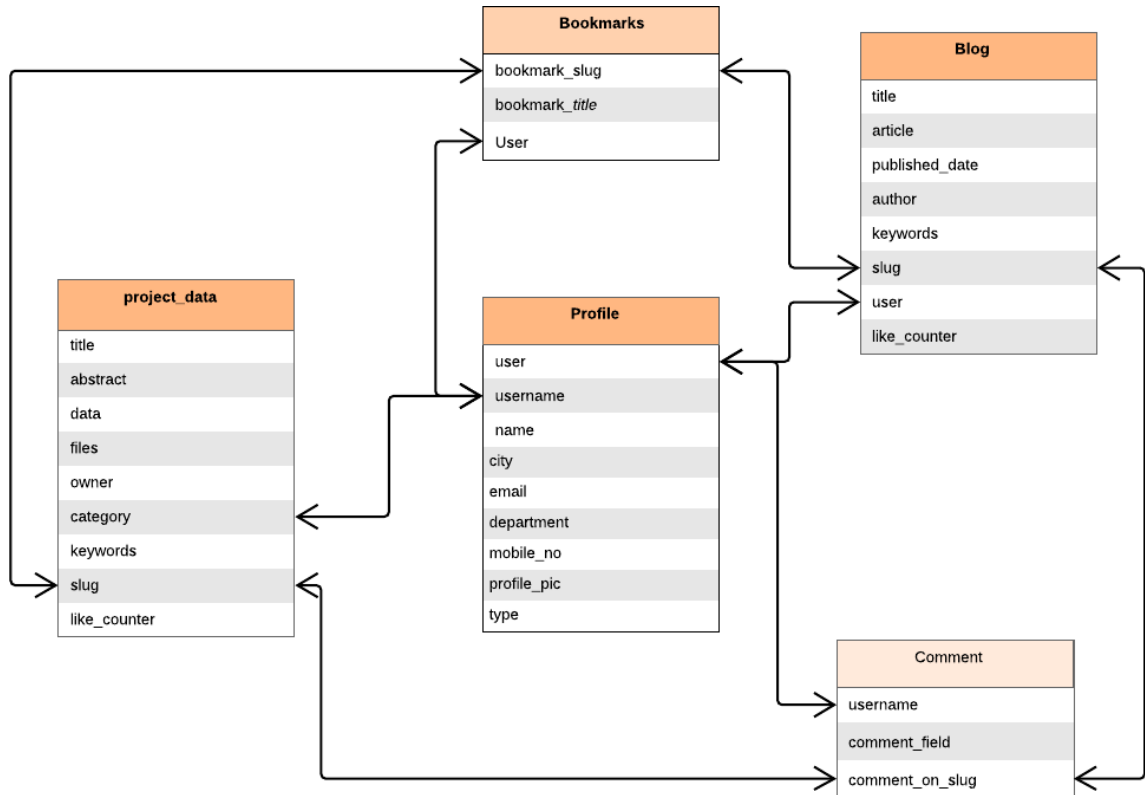
Dependencies:
i) Project Data uploaded by the USER.
ii) Hashtags: Functionality such as Search optimization, Project Recommendation, Questioning are solely based on Hashtags.
iii) User preferences regarding the topic he/she is interested in.

Showstoppers:
i) Adding irrelevant or vague data (hashtags / project contents / questions)
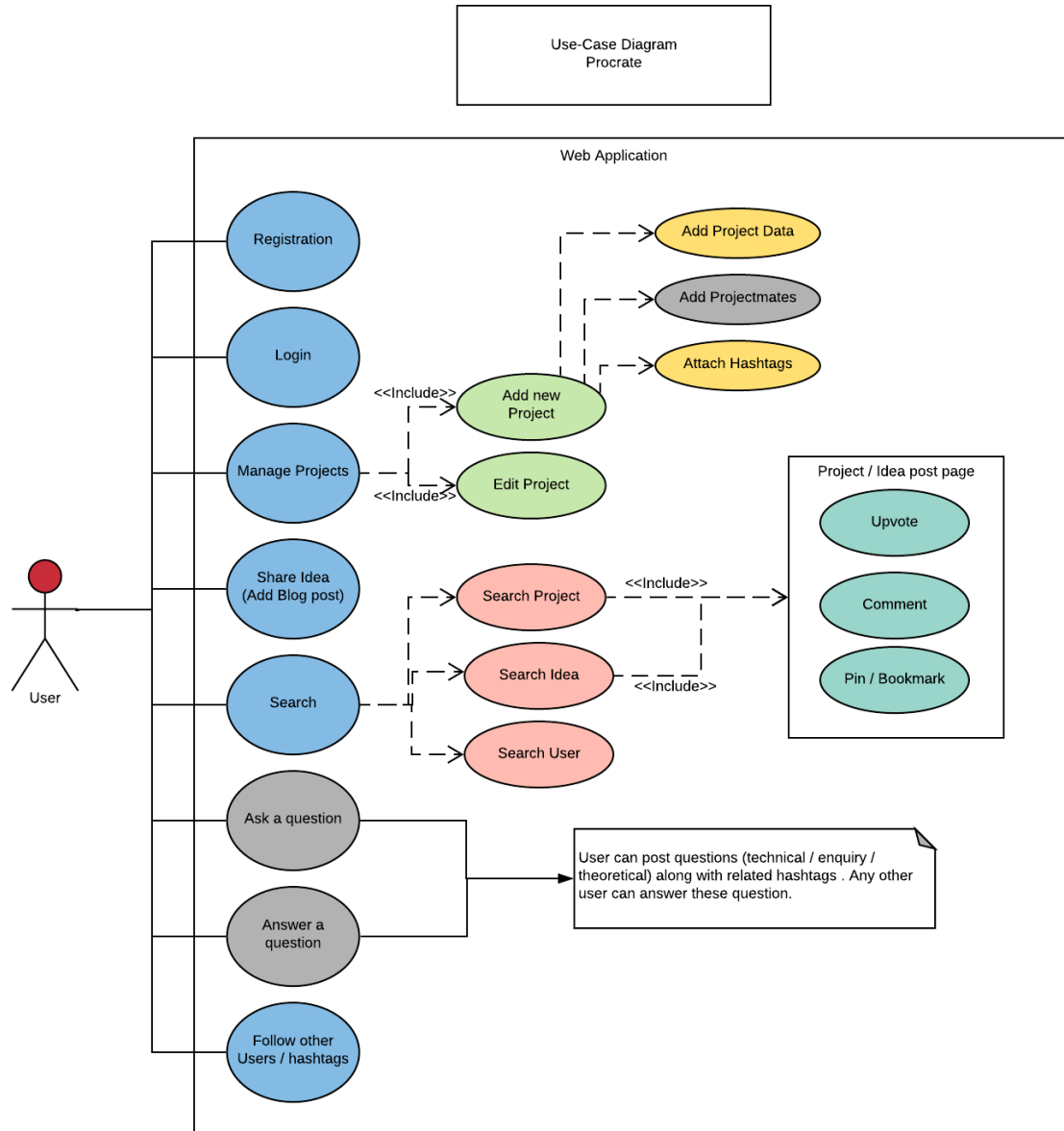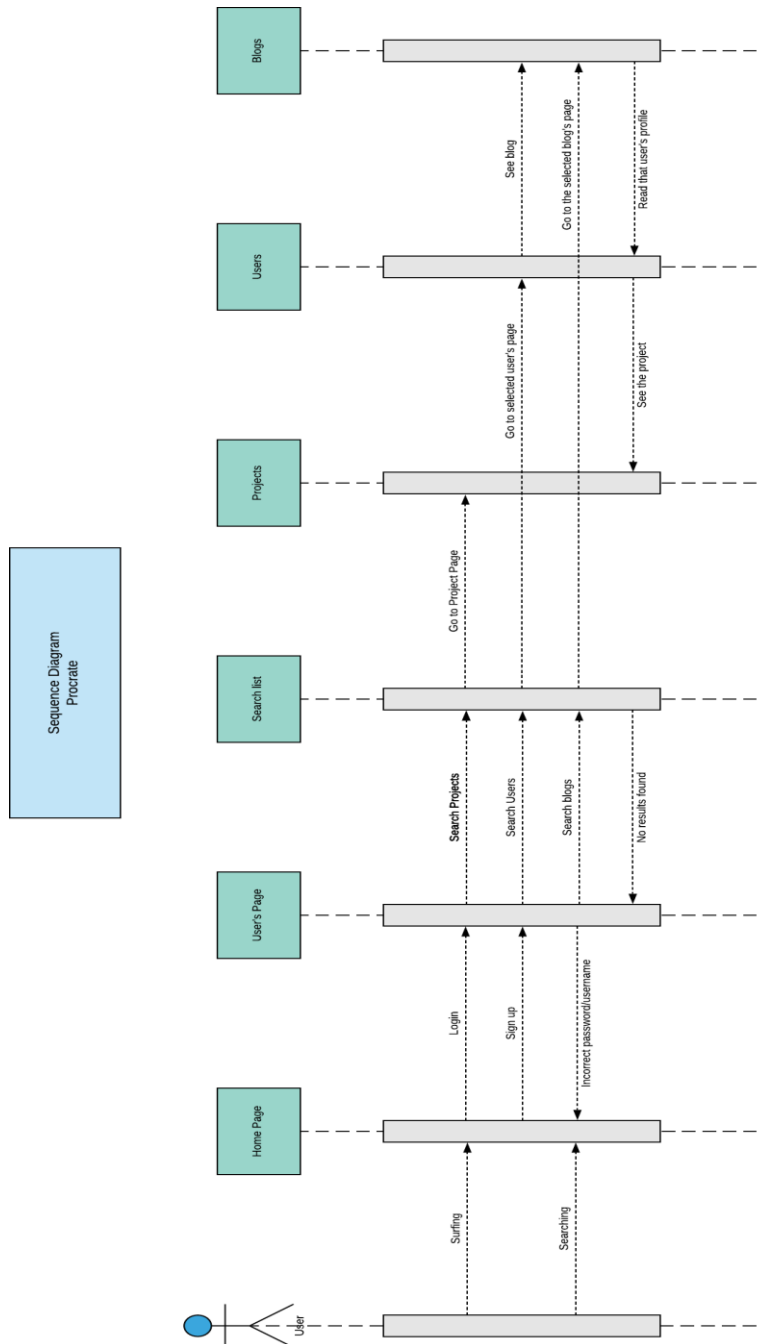ii) Poor internet connectivity

3.3. Entity Relationship Diagram:

Fig. 3.1. E-R Diagram

3.4. Use Case Diagram:

Use-Case Diagram
Procrate

Web Application

Registration

Login

Manage Projects

Share Idea
(Add Blog post)

Search

Ask a question

Answer a
question

Follow other
Users / hashtags

User

Add Project Data

Add Projectmates

Attach Hashtags

<<Include>> Add new
Project

<<Include>> Edit Project

Search Project <<Include>>

Search Idea <<Include>>

Search User

Project / Idea post page

Upvote

Comment

Pin / Bookmark

User can post questions (technical / enquiry / theoretical) along with related hashtags . Any other user can answer these question.
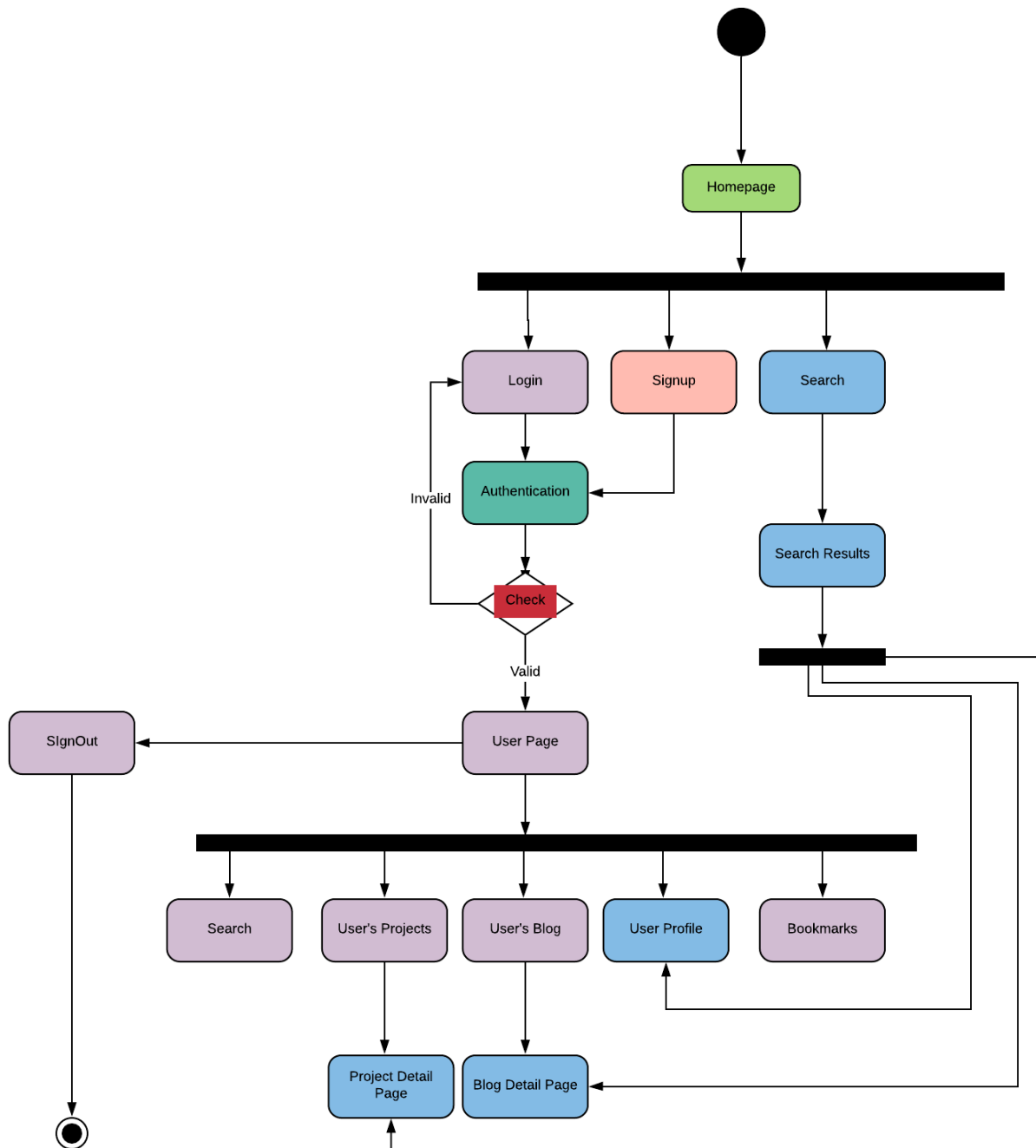
Fig. 3.2. Use Case Diagram

3.5. Sequence Diagram:

Fig. 3.3. Sequence Diagram

3.6. Activity Diagram:

**Fig. 3.4. Activity Diagram**

4. IMPLEMENTATION DETAILS

Procrate web application is completely based upon Django Web Framework which is powered by Python. Django works with MVC architecture i.e. MODEL-VIEW-CONTROLLER. Model part deals with data types and databases, the VIEW deals with the templates of the webpages and Controller connects the backend with the frontend as well as the User/Client Requests.

In Django a web-application is made of multiple apps. Each app is meant for functionality. In case of Procrate, we have created following apps they are: Accounts, Projects, utility, blogs. The frontend part is built using HTML5 and CSS3 with the help of Bootstrap.

In the server side of the project we used Django 2 as the framework which is MVC (Model-View-Controller) architecture that helps to build well-structured web application. Python 3 has many libraries that expand the functional scope of the web application as the backend language. MySQL is one of the supported open-source databases of Django 2.

5. RESULTS

SCREENSHOTS: 1] Homepage:
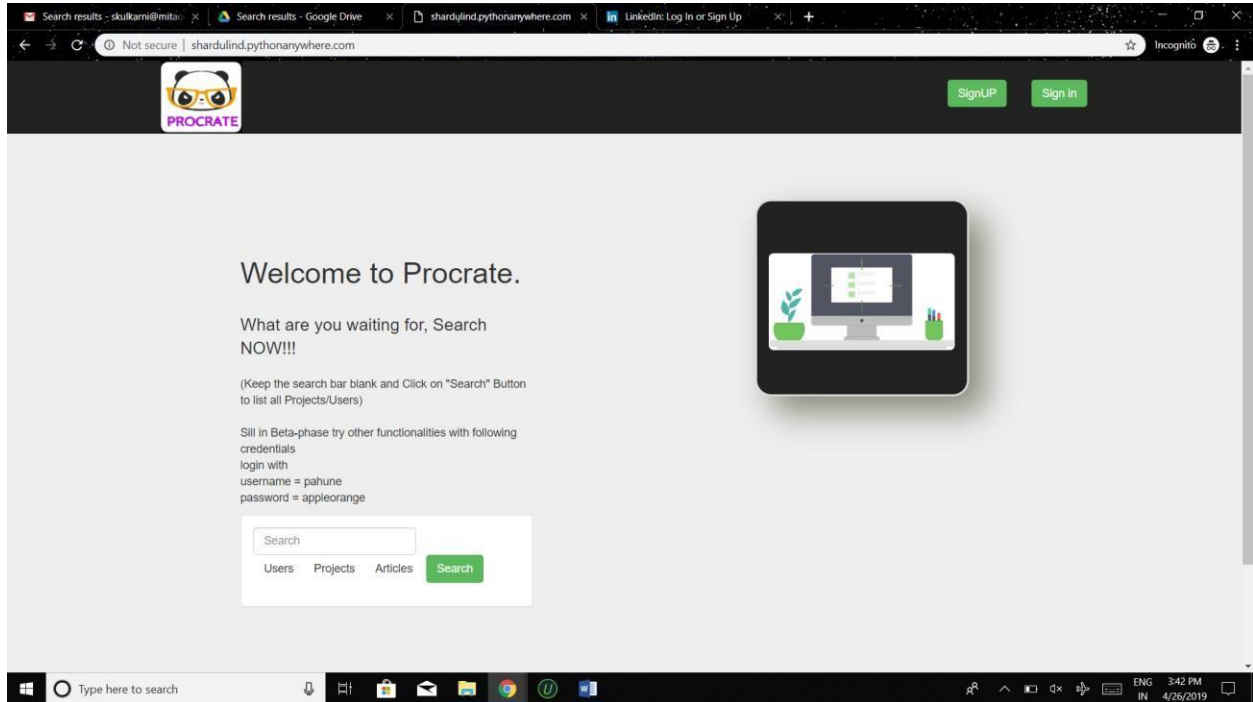
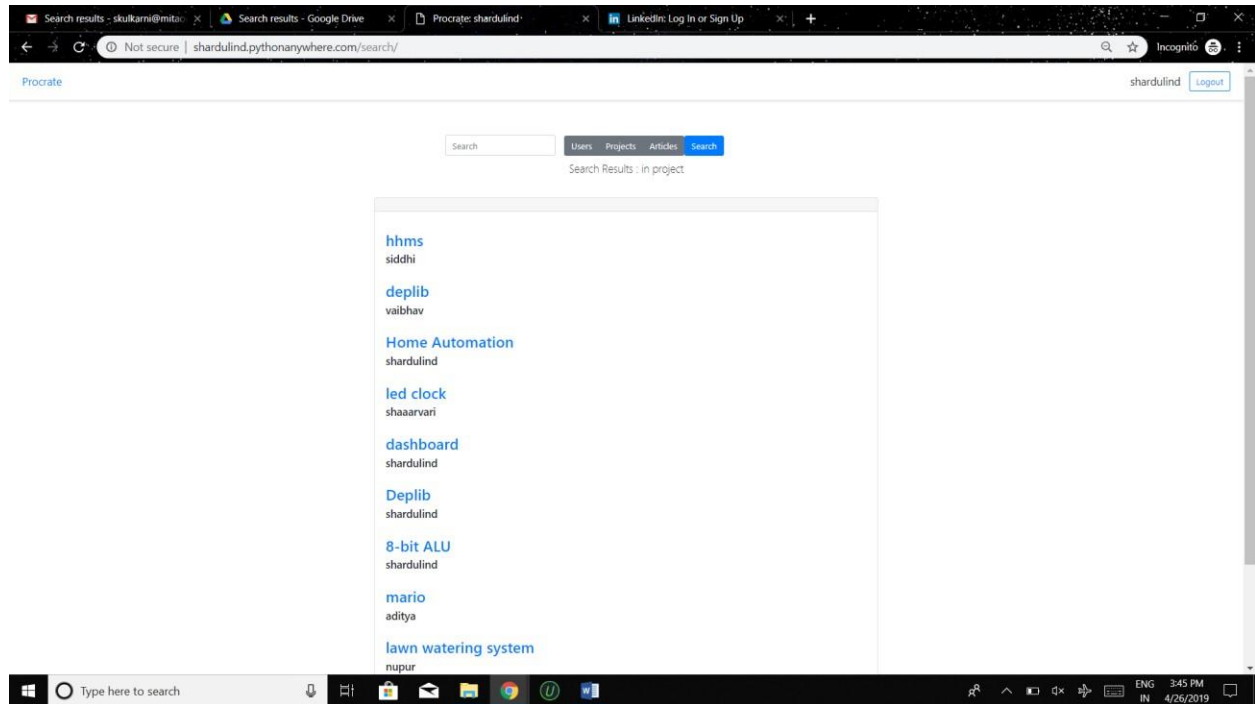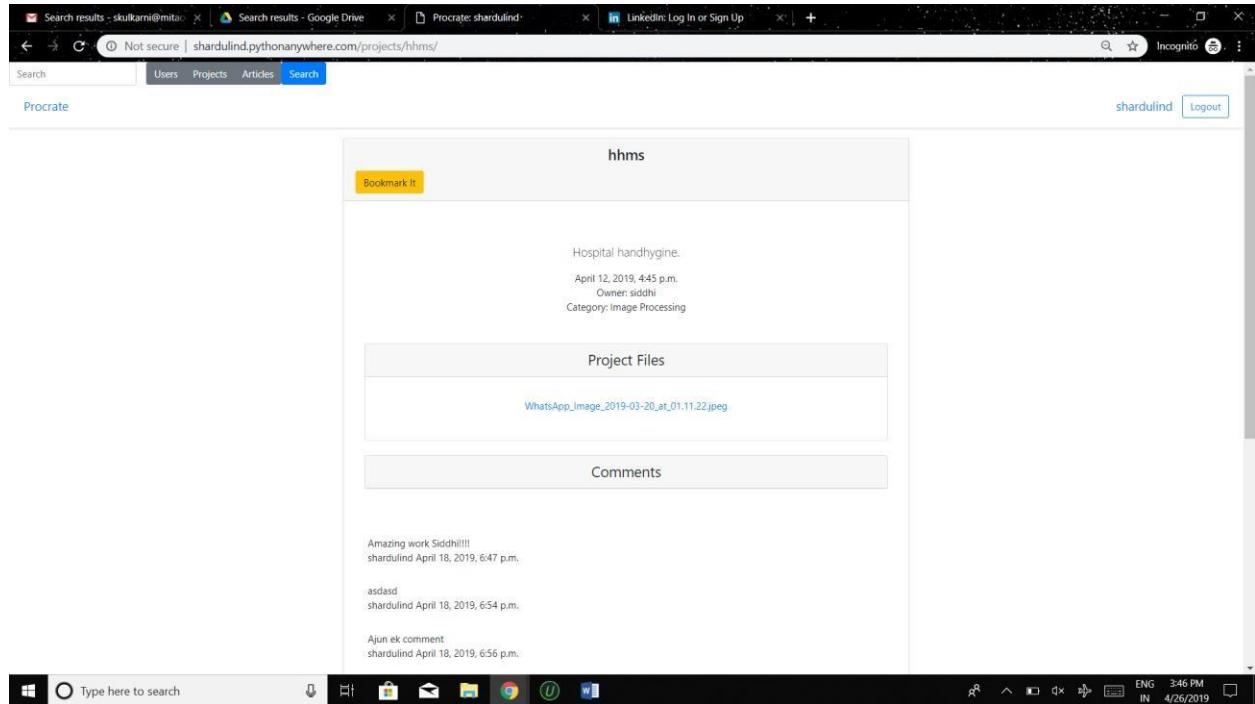**2] Login Page**
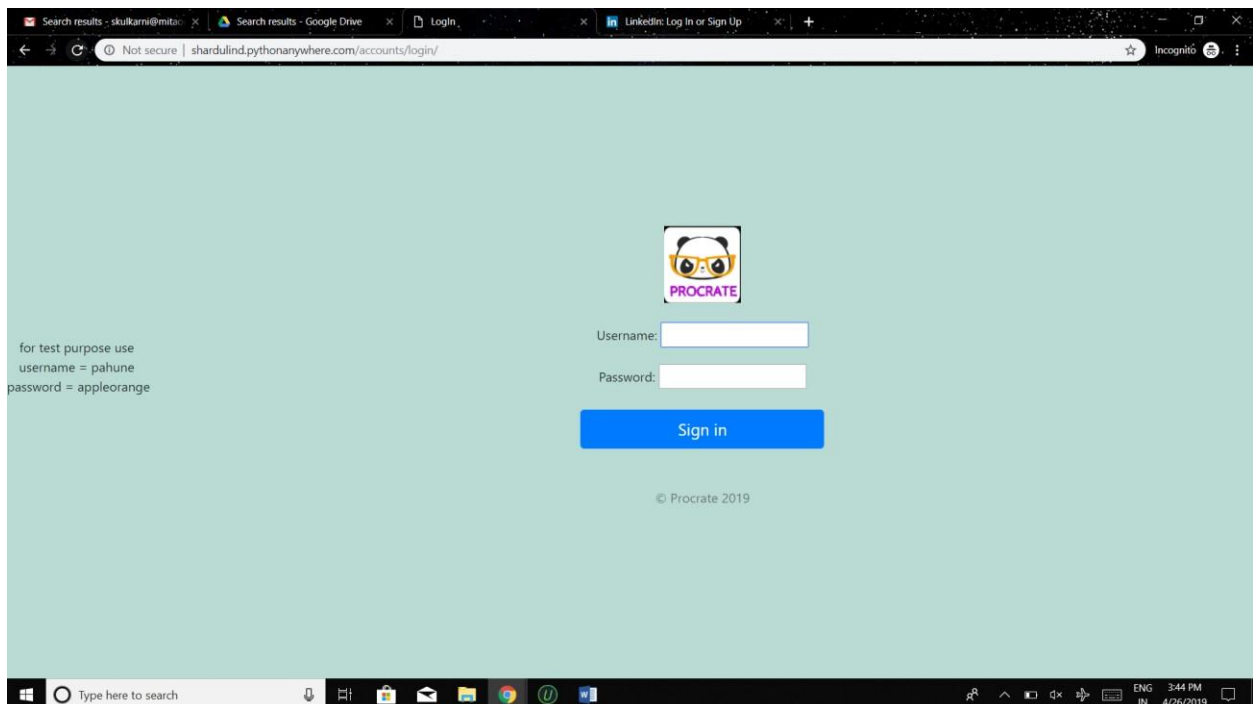
3] User Page

4] Search

5] Project Page

6. CONCLUSION and FUTURE SCOPE

The objective of the project to provide the project sharing platform having a userbase of a College is optimally achieved in Procrate. Procrate is capable to handle user accounts and creating user profile, upload projects, bookmark projects and Comment on the projects. Procrate is hosted with the domain name www.procrate.ml , web hosting is done with the help of cloud services using pythonanywhere.com.

Many more dynamic functionalities are to be added on the Procrate such as adding teammates on project so as to give proper contributions to every member. Give more rights to user related to project such as hiding the files, providing citation permissions, providing a upvote/like button which will help to optimize the search results.

REFERENCES

- **Django Unleashed by Andrew Pinkham**

- **"Django Official Documentation" https://docs.djangoproject.com/en/2.2/**

- **"Bootstrap Documentation" https://getbootstrap.com/docs/4.3/getting-started/introduction/**