

Modern College of Arts, Commerce and Science

Computer Science Department

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- Class : M.sc. (Computer Science) – I
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- Project Name : StuddyBuddy

YEAR 2021-2022



**P. E. Society's
Modern College of Arts, Science & Commerce (Autonomous)
Shivajinagar, Pune – 411005**

Department of Computer Science

**M.Sc. Computer Science - II, Sem-III
2021-22**

CERTIFICATE

This is to certify that Mr. / Miss. _____

Roll No. _____ has successfully completed the Project entitled

as part of the M.Sc. (Computer Science) - II curriculum during the academic year
2021 - 2022

Date:

Project Guide

Vice-Principal and Head,
Department of Computer Science

Examiners: Name Sign

1. _____

2. _____

Study Buddy

PROJECT REPORT

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ABOUT THE PROJECT

Learning new technologies on your own can be challenging so we created a Web App.

“StudyBuddy” is an online portal for learners, students and enthusiasts of technology where they can learn about new inventions, solve problems or simply discuss about a topic with their peers..

Landing Page - The site opens up to an attractive landing page where user can see the app name and its short description. There are two options for user. One of which is registration for new account and the other one is login for existing users.

Login/User Registration - Those who wish to create account in StudyBuddy have to register first. Only authenticated users can login in to the app.

Home Page - The homepage is designed in such a way that the layout is as user-friendly as possible. There is a navigation menu at the top. One can search for topics/rooms. User can go to his/her profile by clicking at top right corner. One can directly browse topics or can search for recent activities.

Create/Update Room - This module is for creating a new room or updating an existing one. This module collects information like Room Name, Topic Name, and optional Room Description.

For live project demo -

visit here: <https://studybuddydev.herokuapp.com>

PROBLEM DEFINITION

- To do meetings and discussions about study related topics, one have to do personal meet or call.
- If anybody is using social media app, there is restriction of having number or user id to connect with other users.
- Also there is no existing groups for study to join and communicate with others.
- It is difficult to create and manage all different types of study related groups.
- In this pandemic, physically gathering and study together is not possible.

EXISTING SYSTEM

In existing system, if user has a query regarding study topics or technologies he/she has to meet someone for the solution.

If users have many questions so it is not possible to meet everytime and solve the problem.

It is not possible to take different perspectives on the same topic from many people.

PROPOSED SYSTEM

- StudyBuddy is an online portal for learners, students and enthusiasts of technology where they can learn about new inventions, solve problems or simply discuss about a topic with their peers.
- It enables users to post queries and discuss about any topic online without interacting physically.
- User can ask any question and get response from the community worldwide.
- User can get different perspectives on the same point.
- User can also join different rooms regarding one topic and also to keep oneself updated with the bleeding edge technology.

SCOPE OF THE SYSTEM

This system is designed as an online web-based application which shall be accessed by any device, either a computer, tablet, and mobile phone.

The scope of this application to build a user friendly study website, where user will be able to search any room which is available anywhere in the world.

By using Online study portal it will be easy for learners to resolve queries online saving their time. By posting queries through this application will help to reach maximum number of people.

FEASIBILITY STUDY

Operational Feasibility

An estimate should be made to determine how much effort and care will go into the developing of the system including the training to be given to the user.

Operational feasibility determines if the human resources available to operate system once it has been installed.

It is a measure of how well a proposed system solves the problem, and takes advantages of opportunities identified in the requirements analysis phase of system developments.

Technical Feasibility

The main consideration is to be given to the study of available resources of the organization where the software is to be implemented.

The system analyst evaluates the technical merits of the system giving emphasis on the performance, reliability, maintainability and productivity.

By taking the consideration before developing the proposed system, the resource availability of the organization was studied.

The organization IS equipped with sophisticated machines and the software.

Economical Feasibility

Economic feasibility is the most important and frequently used method for evaluating the effectiveness of the proposed system.

It is very essential because the main goal of the proposed system is to have economically better result along with increased efficiency.

Cost benefit analysis is usually performed for this purpose. Since the organization is well equipped with the required hard ware, the project was found to be economical.

REQUIREMENT ANALYSIS

The primary goal of the system analyst is to understand the requirements of the new system that is to be developed. For that the study of specification of the requirements is very essential. For the development of the new system, a preliminary survey of the existing system will be conducted. Investigation is done whether the upgradation of the system into an application program could solve the problems and eradicate the inefficiency of the existing system.

Hardware requirements :-

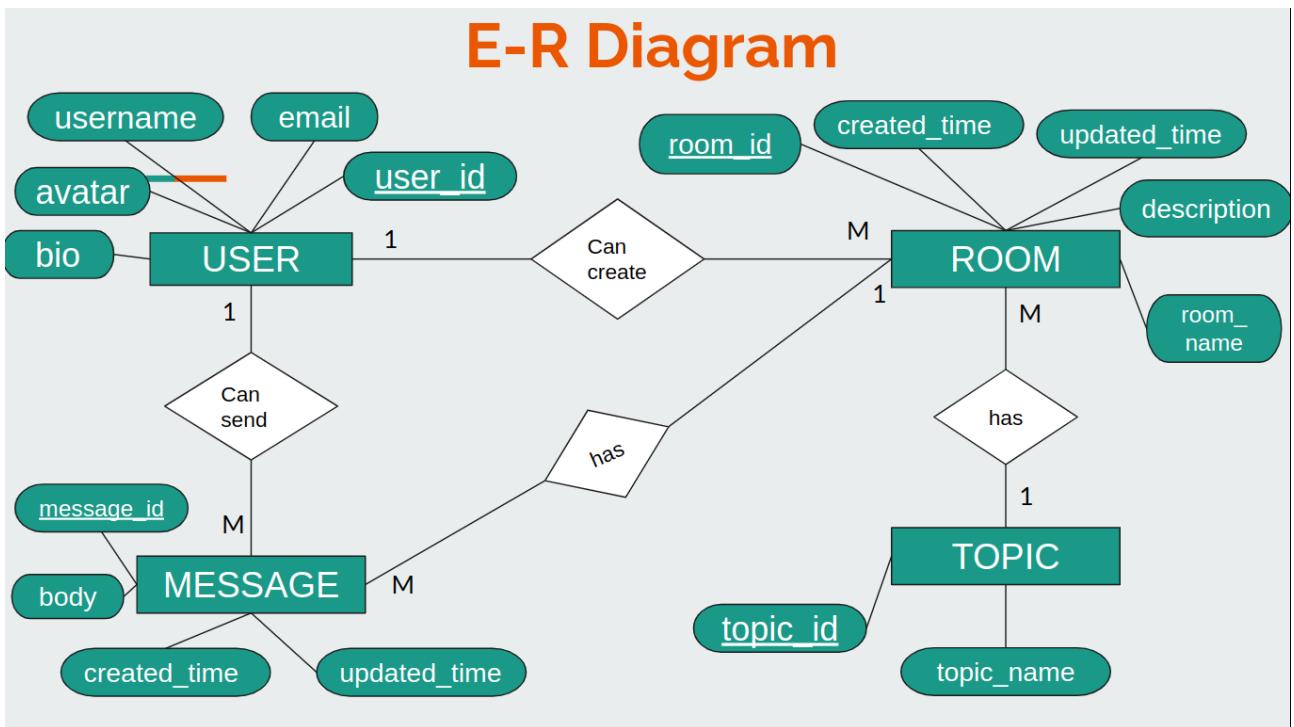
500MB RAM and above, 1.5GHz Processor Speed, 200MB of free disk space.

Software requirements :-

Linux / Windows / Mac , Web Browser, SQLite Database,

Python-Django

E-R DIAGRAM



NORMALIZED DATABASE DESIGN

Table Name: User

Fields	Type	Null	Key	Default
user_id	int	NO	primary	
username	char	NO	unique	
name	char	NO		
email	char	NO	unique	
bio	char	YES		
avatar	image	YES		avatar.svg

Table Name: Topic

Fields	Type	Null	Key	Default
topic_id	int	NO	primary	
topic_name	char	NO		

Table Name: Participants

Fields	Type	Null	Key	Default
room_id	int	NO	foreign	
user_id	int	NO	foreign	

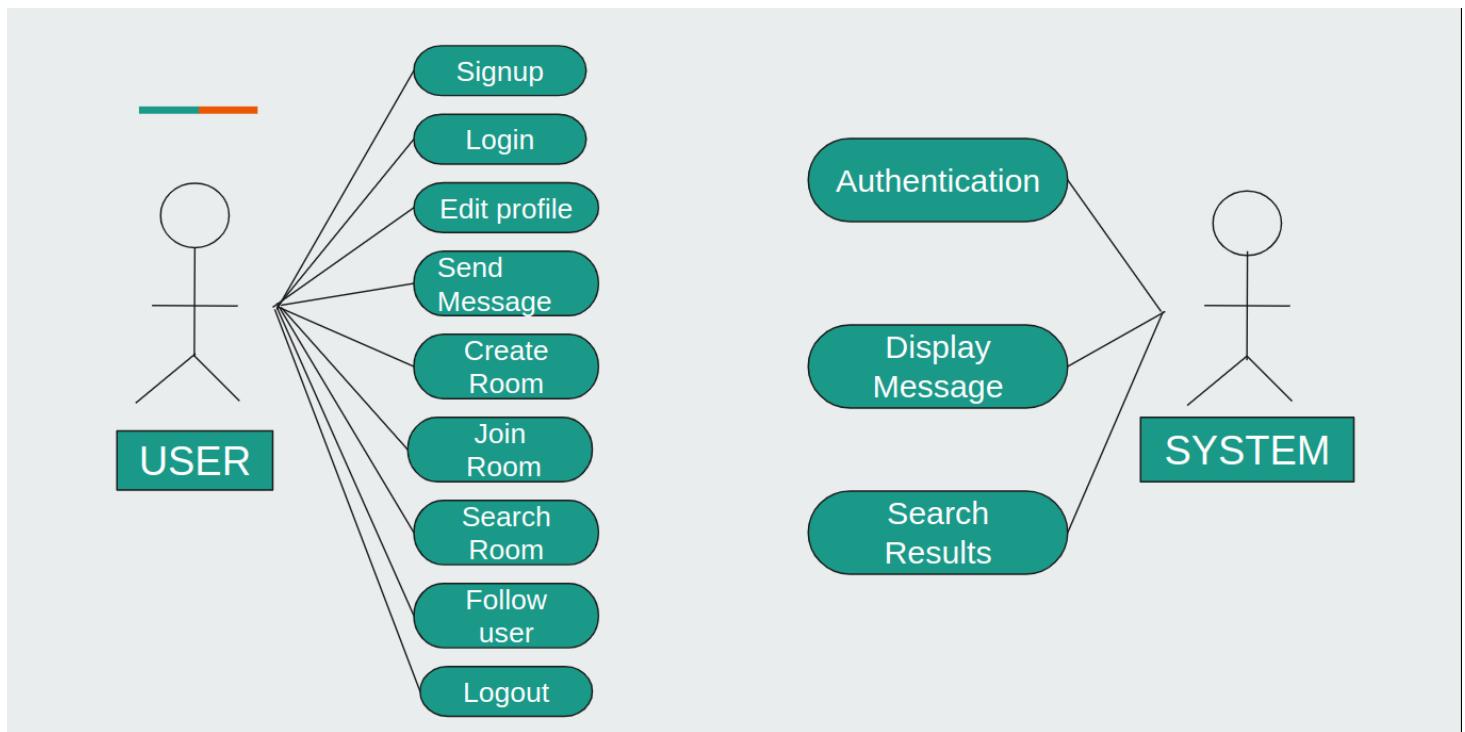
Table Name: Room

Fields	Type	Null	Key	Default
room_id	int	NO	primary	
name	char	NO		
description	char	YES		
created_time	datetime	NO		
updated_time	datetime	NO		
user_id	int	NO	foreign	
topic_id	int	NO	foreign	

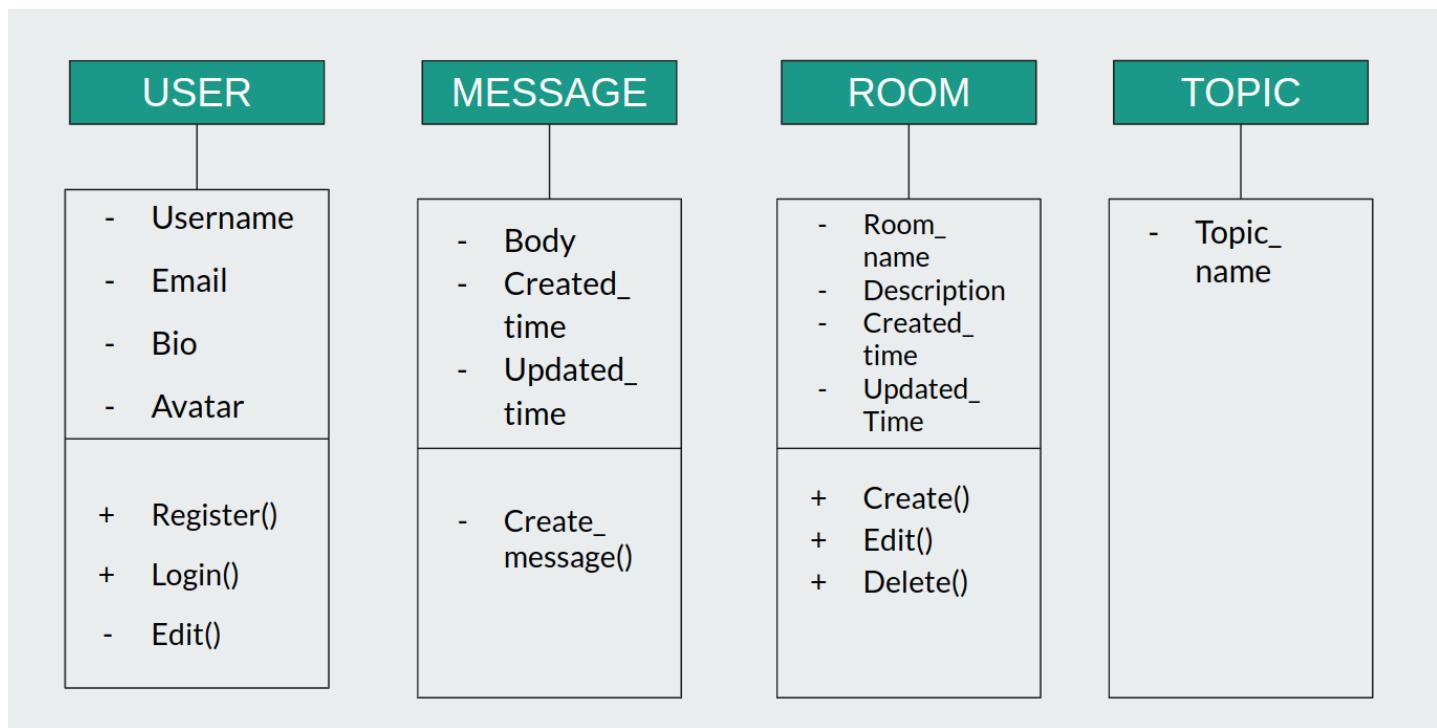
Table Name: Message

Fields	Type	Null	Key	Default
message_id	int	NO	primary	
message_body	char	NO		
message_created	datetime	NO		
message_updated	datetime	NO		
user_id	int	NO	foreign	
room_id	int	NO	foreign	

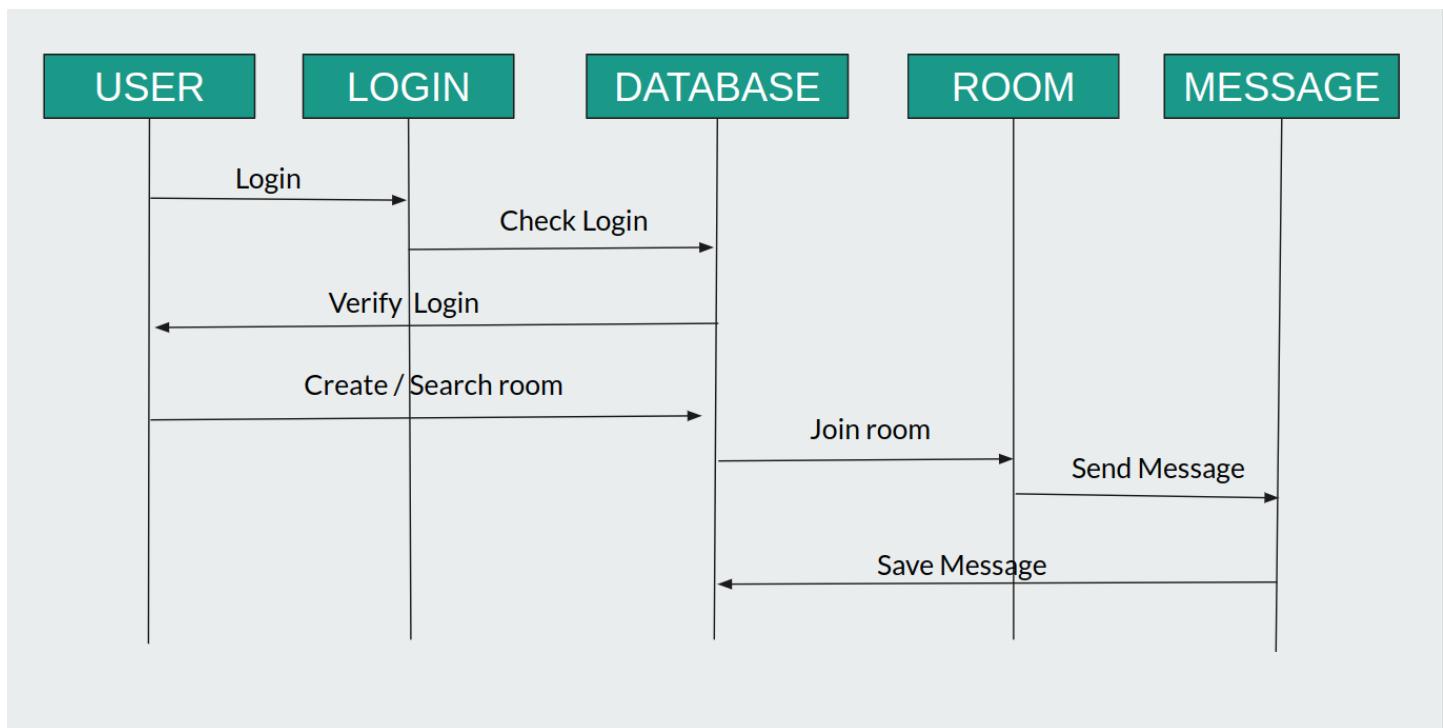
USE-CASE DIAGRAM



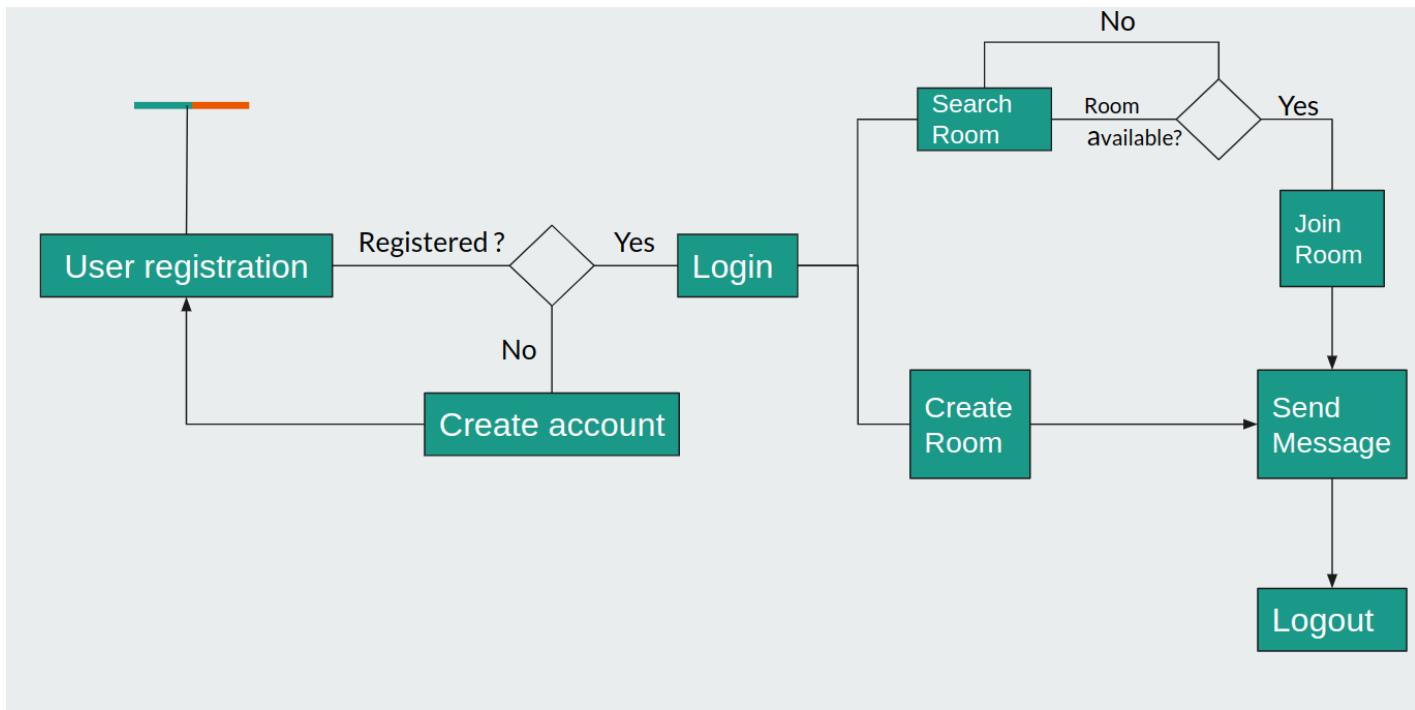
CLASS DIAGRAM



SEQUENCE DIAGRAM



ACTIVITY DIAGRAM



BENEFITS

- ✓ System made specially to provide a flexible, simple way to communicate with each others.
- ✓ Time saving.
- ✓ There are no entry fees and other additional charges.
- ✓ Don't have to go anywhere.
- ✓ The platform is easy to use, and everything is done on one website.
- ✓ Simple and speed efficient.

DRAWBACKS

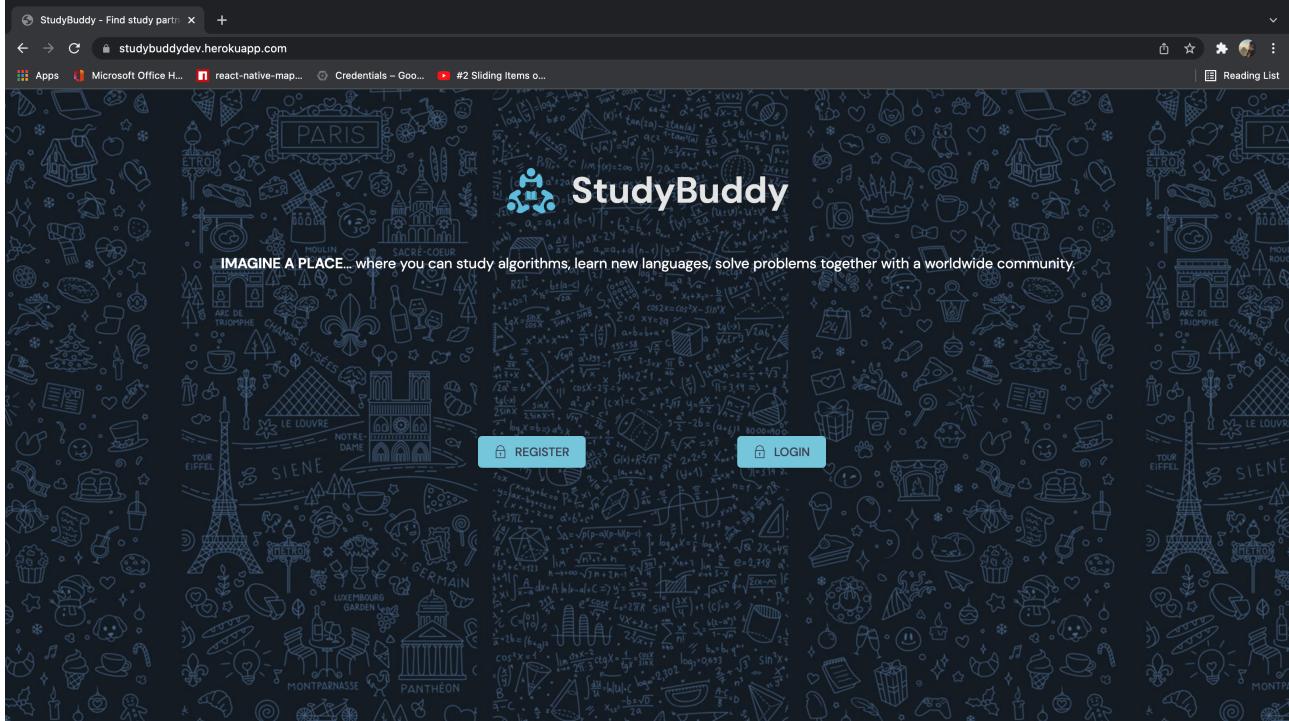
- x Online chatting is addictive. You can easily spend a lot more time online.
- x As this an online web app, it needs internet.
- x A website may go down for multiple reasons.

Limitations

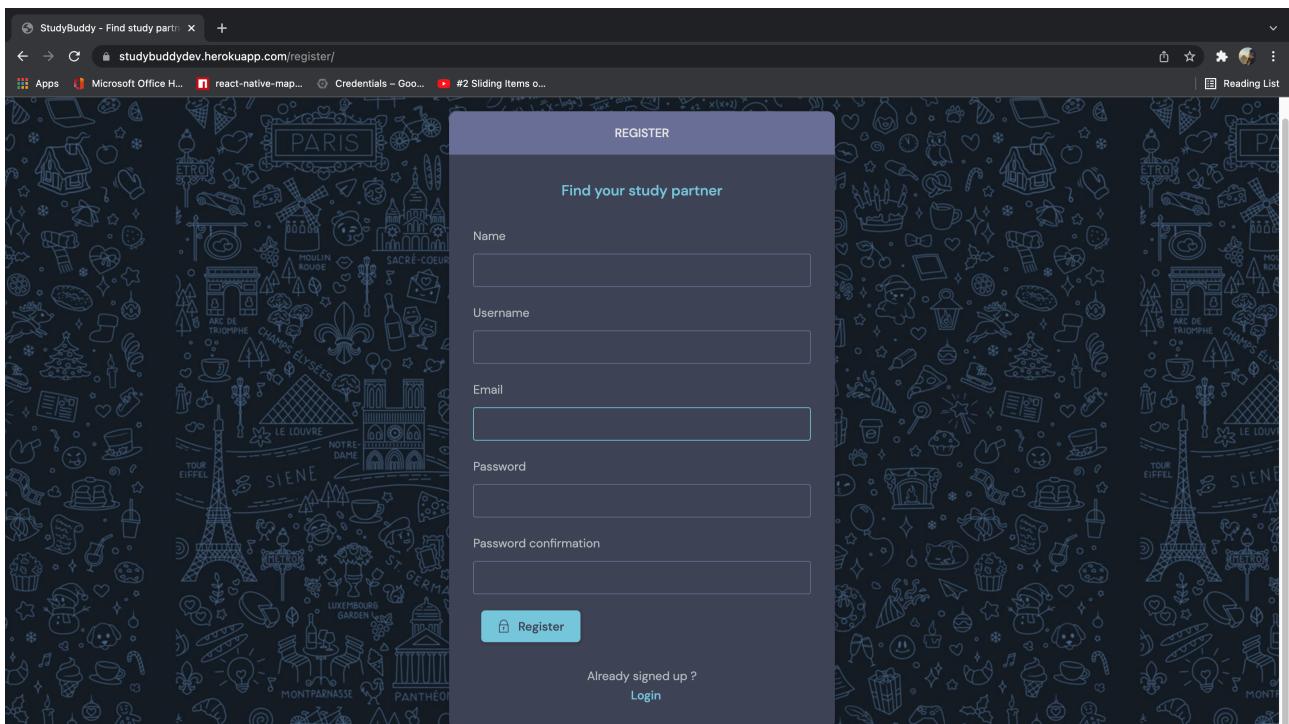
- x Security risk posed by threat vectors.
- x Anyone can send messages.

USER INTERFACE DESIGN MENUS

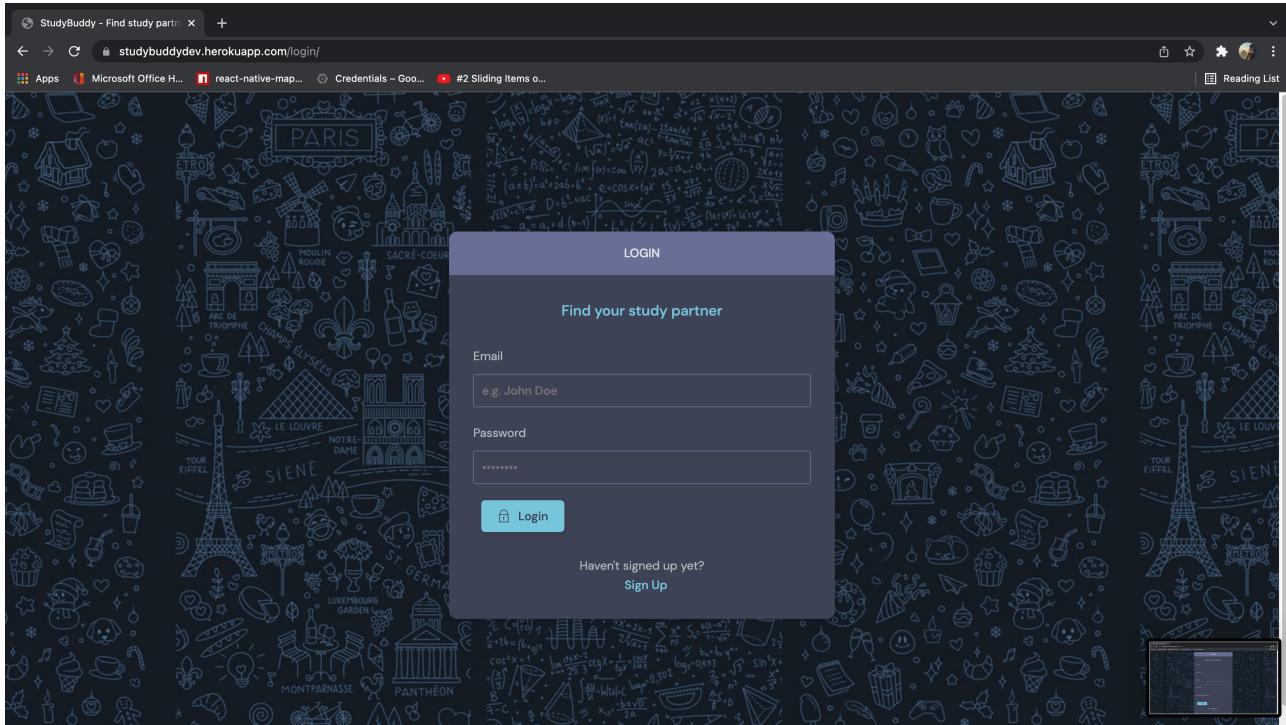
Landing Page



Register Page



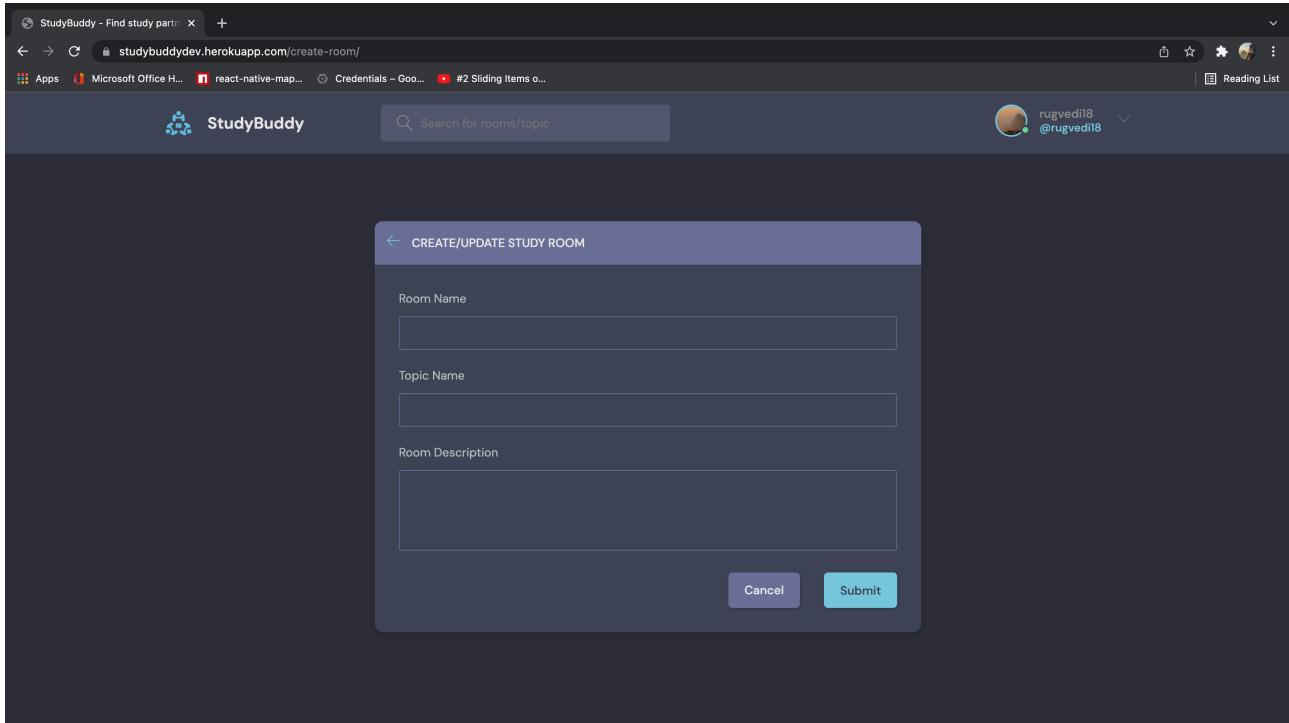
Login page



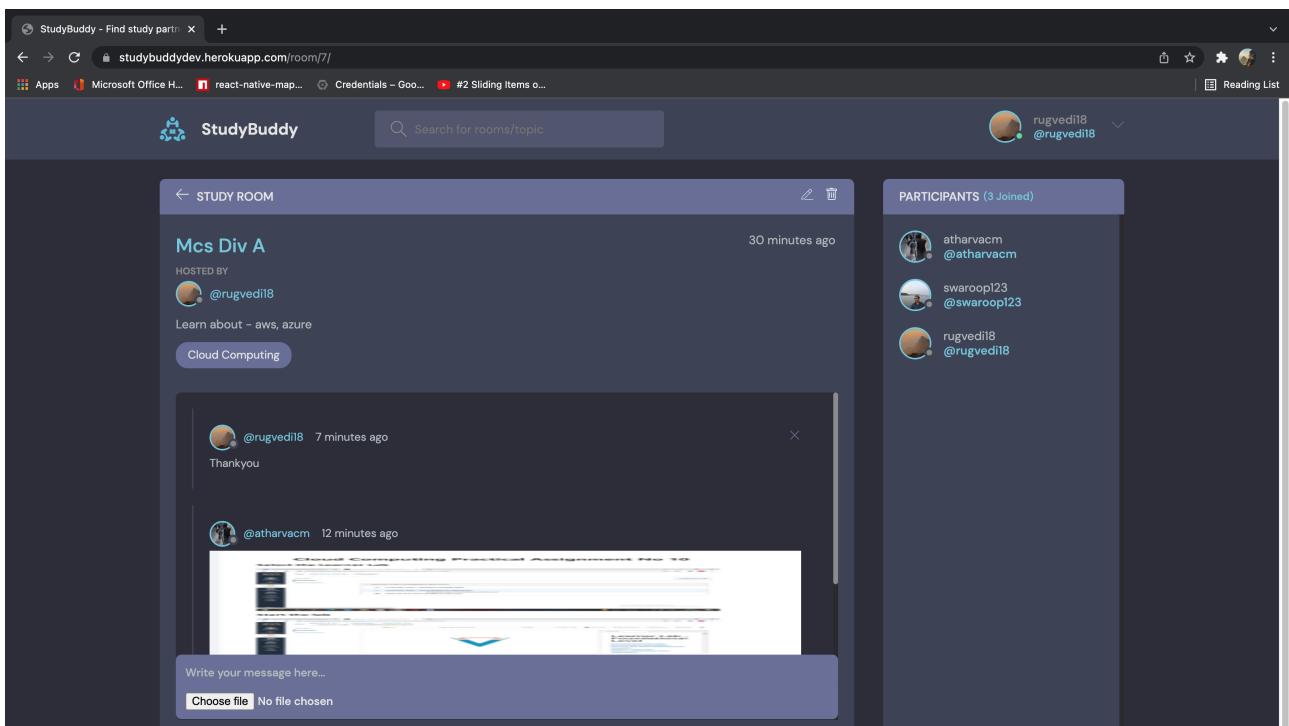
Home Page

A screenshot of the StudyBuddy home page. The interface is dark-themed. On the left, there is a sidebar titled "BROWSE TOPICS" with categories like All (4), PSA (1), Cloud Computing (1), Artificial Intelligence (1), Django (1), and More. In the center, there is a "STUDY ROOM" section with a button "+ Create Room". Below it, there are three study room cards: 1) "Django Basics" hosted by @atharvacm, 0 minutes ago, 0 joined, and tagged "Django". 2) "MCA sem 3" hosted by @swaroop123, 15 minutes ago, 2 joined, and tagged "Artificial Intelligence". 3) "Mcs Div A" hosted by @rugvedi18, 25 minutes ago, 3 joined, and tagged "Cloud Computing". On the right, there is a "RECENT ACTIVITIES" section showing posts from users @atharvacm, @rugvedi18, and @swaroop123. The browser's address bar shows "studybuddydev.herokuapp.com/home/". The top of the browser window has several tabs and icons.

Create Room



Room Page



Browse Topics

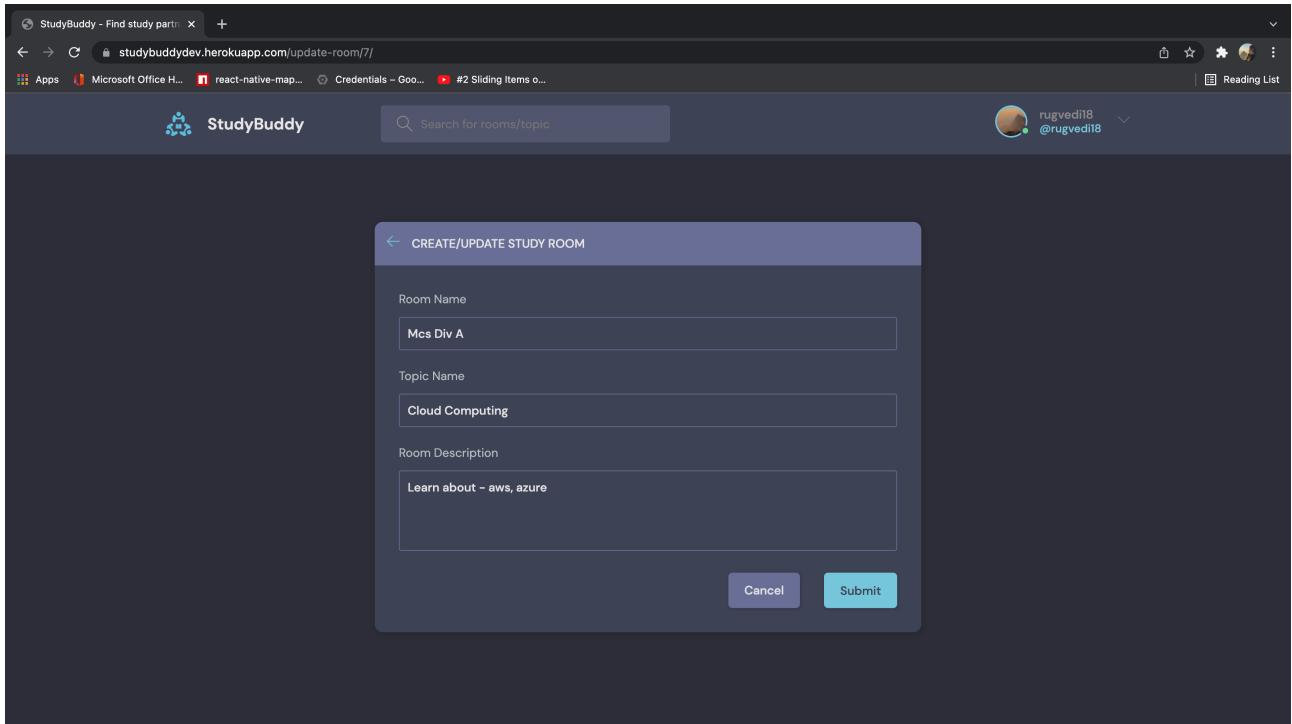
The screenshot shows a web browser window for the StudyBuddy application. The URL in the address bar is `studybuddydev.herokuapp.com/topics/`. The page title is "StudyBuddy - Find study partner". The main content area is titled "BROWSE TOPICS" and contains a search bar with the placeholder "Search for topics". Below the search bar is a list of topics with their counts:

Topic	Count
All	4
PSA	1
Cloud Computing	1
Artificial Intelligence	1
Django	1

Delete Message/Room

The screenshot shows a confirmation dialog box on the StudyBuddy application. The dialog has a blue header bar with a back arrow and the word "BACK". The main content area asks the user: "Are you sure you want to delete 'web is booming now a days'?". At the bottom of the dialog is a blue button labeled "Confirm".

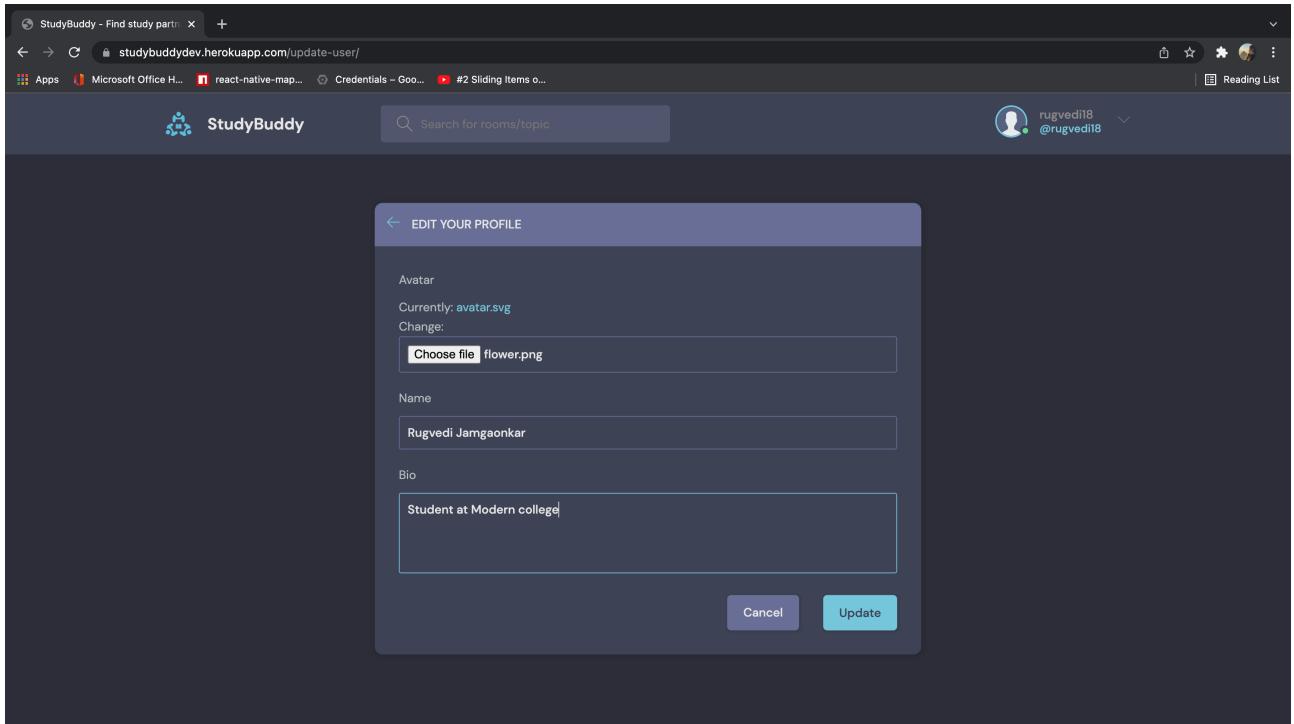
Edit Room



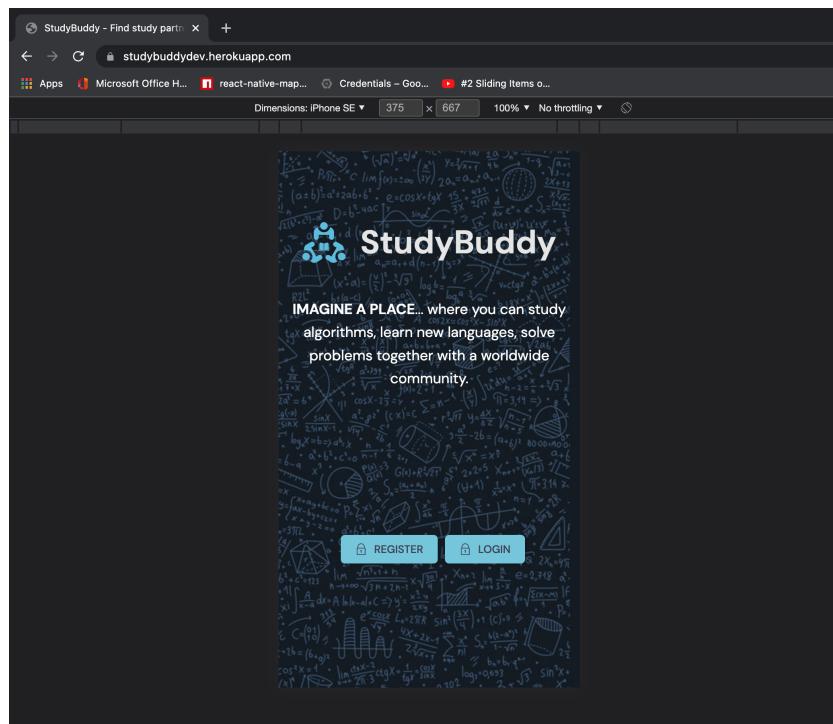
Profile Page

The screenshot shows the user profile page for 'rugvedi18'. The left sidebar lists 'BROWSE TOPICS' with categories: All (4), PSA (1), Cloud Computing (1), Artificial Intelligence (1), and Django (1). Below this is a 'More' dropdown. In the center, there's a profile card for 'rugvedi18' (@rugvedi18) featuring a circular profile picture, the name, and a 'Edit Profile' button. To the right, there's a 'RECENT ACTIVITIES' section showing two posts from the user: one reply to a post about 'Mcs Div A' and another reply to the same post. At the bottom, there's a section for 'STUDY ROOMS HOSTED BY RUGVEDI JAMGAONKAR' showing a room named 'Mcs Div A' with a host icon, the time '29 minutes ago', and a 'Cloud Computing' tag. The room summary also indicates '3 Joined'.

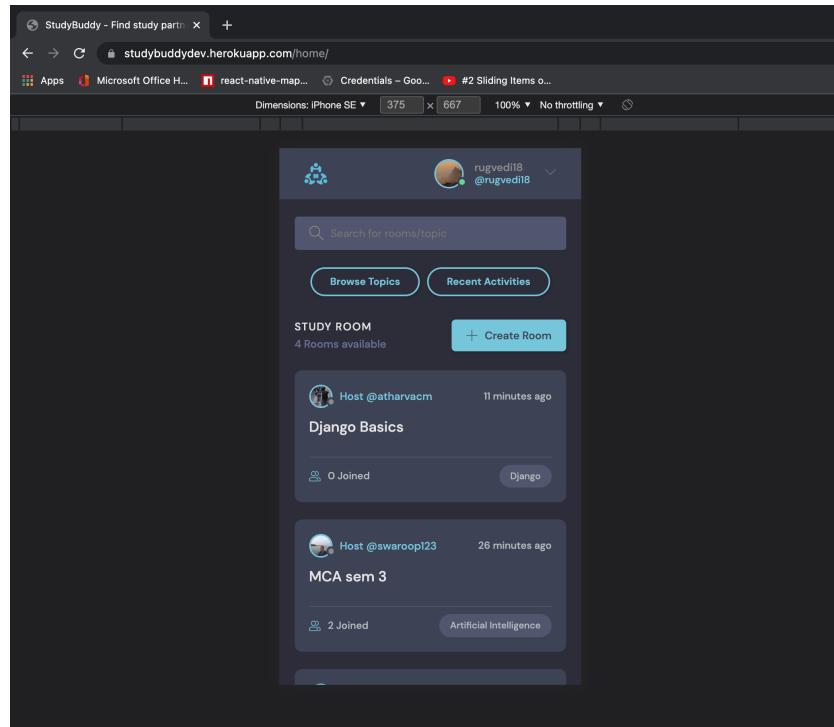
Edit Profile



Landing Page Mobile Responsive



Home Page Mobile Responsive



FUTURE ENHANCEMENT

- Ability to create private rooms.
- Facility to follow any user.
- Voice call integration in rooms.

BIBLIOGRAPHY

- ◆ <https://discord.com>
- ◆ <https://docs.djangoproject.com/en/4.0/>