



[Comic-Collection]

ON

Submitted in partial fulfillment of the requirements
of the degree of

**Bachelor of Engineering
(Information Technology)**

By

Under the guidance of

Dipti Karani



Department of Information Technology

**VIVEKANAND EDUCATION SOCIETY'S INSTITUTE OF TECHNOLOGY, Chembur, Mumbai
400074**

(An Autonomous Institute, Affiliated to University of Mumbai)

Declaration

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

(Signature)
Aditi Taksale 58

Abstract

Abstracts contain most of the following kinds of information in brief form. The body of your paper will, of course, develop and explain these ideas much more fully. As you will see in the samples below, the proportion of your abstract that you devote to each kind of information—and the sequence of that information—will vary, depending on the nature and genre of the paper that you are summarizing in your abstract. And in some cases, some of this information is implied, rather than stated explicitly. The Publication Manual of the American Psychological Association, which is widely used in the social sciences, gives specific guidelines for what to include in the abstract for different kinds of papers—for empirical studies, literature reviews or meta-analyses, theoretical papers, methodological papers, and case studies.

Keywords-*literature, theoretical, methodological, include, Publication*

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CHAPTER: 1 INTRODUCTION



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CHAPTER: 1 INTRODUCTION

The Idea Submission Platform is a full-stack web application developed to provide users with an organized and interactive space to submit, explore, and engage with innovative ideas. This project brings together modern web technologies— Flask for a lightweight and efficient backend, MongoDB for scalable and flexible data management, and HTML, CSS, JavaScript (with Bootstrap and AJAX) for a responsive and intuitive frontend experience.

The platform enables users to:

- Register and log in securely to manage their submitted ideas.
- Submit new ideas with details such as title, description, category tags, and more.
- Comment on and upvote others' ideas, fostering interaction and feedback.
- Browse, filter, and explore submitted ideas based on categories and popularity.
- Maintain a personalized user profile for managing all their idea-related activities.

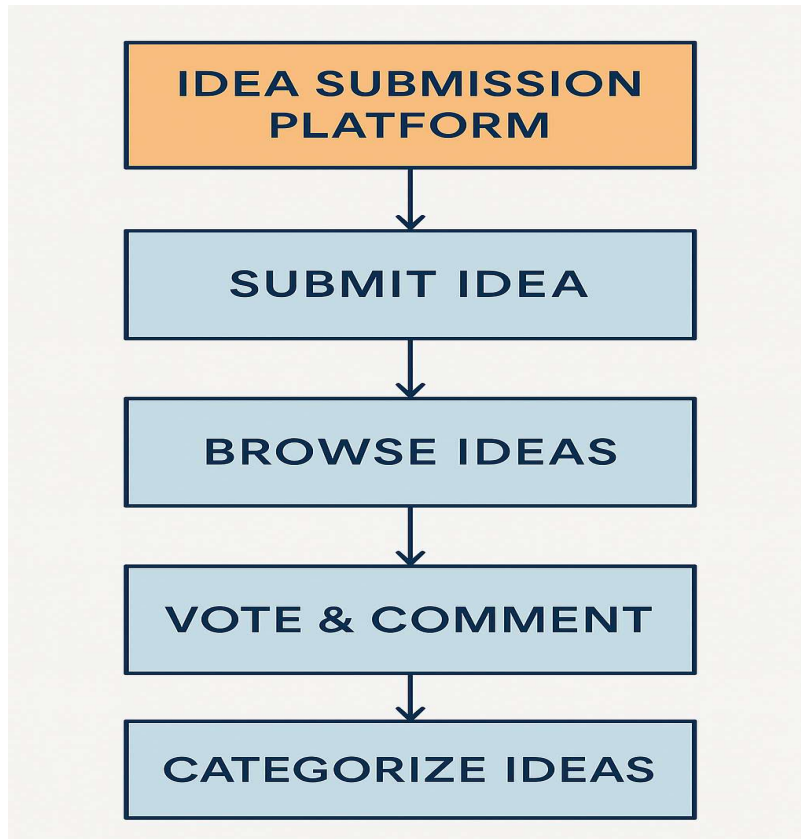
The application follows a modular architecture, ensuring easy scalability and code maintainability. Flask APIs manage all essential CRUD operations, while MongoDB offers schema-less data storage to accommodate diverse idea entries. The user interface is designed to be clean, dynamic, and mobile-friendly, ensuring a consistent experience across devices.

This project not only highlights seamless integration between backend and frontend technologies but also demonstrates how full-stack development can be utilized to build impactful, community-driven platforms focused on collaboration and innovation.

Chapter 2

Design and Implementation

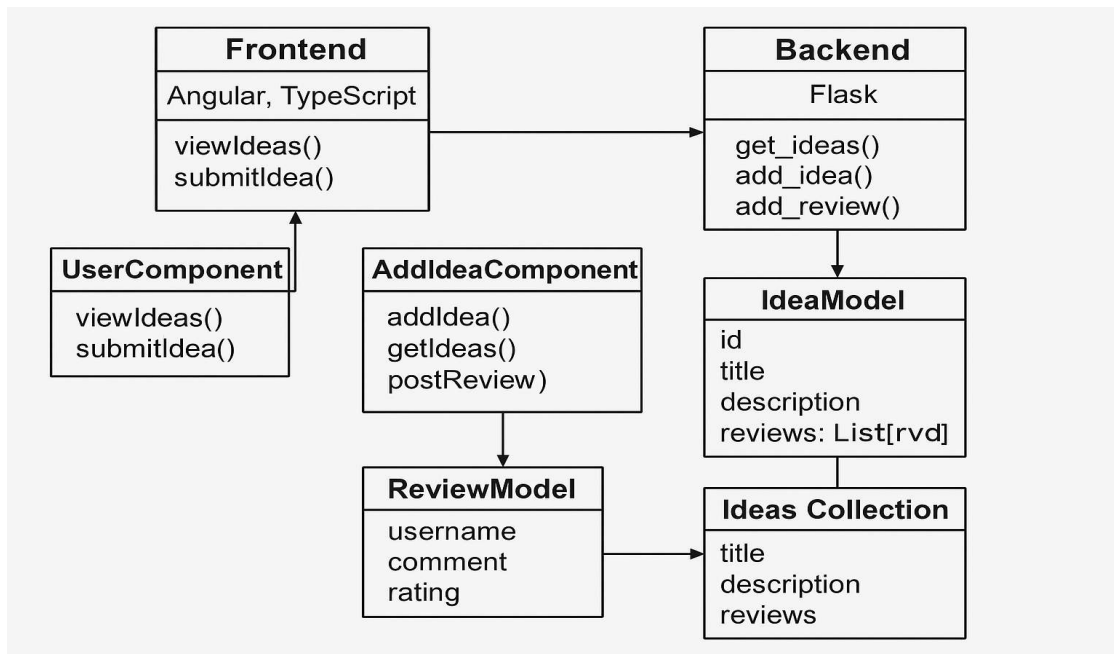
2.1 Block Diagram



This project follows a full-stack architecture using **Angular**, **Flask**, and **MongoDB**.

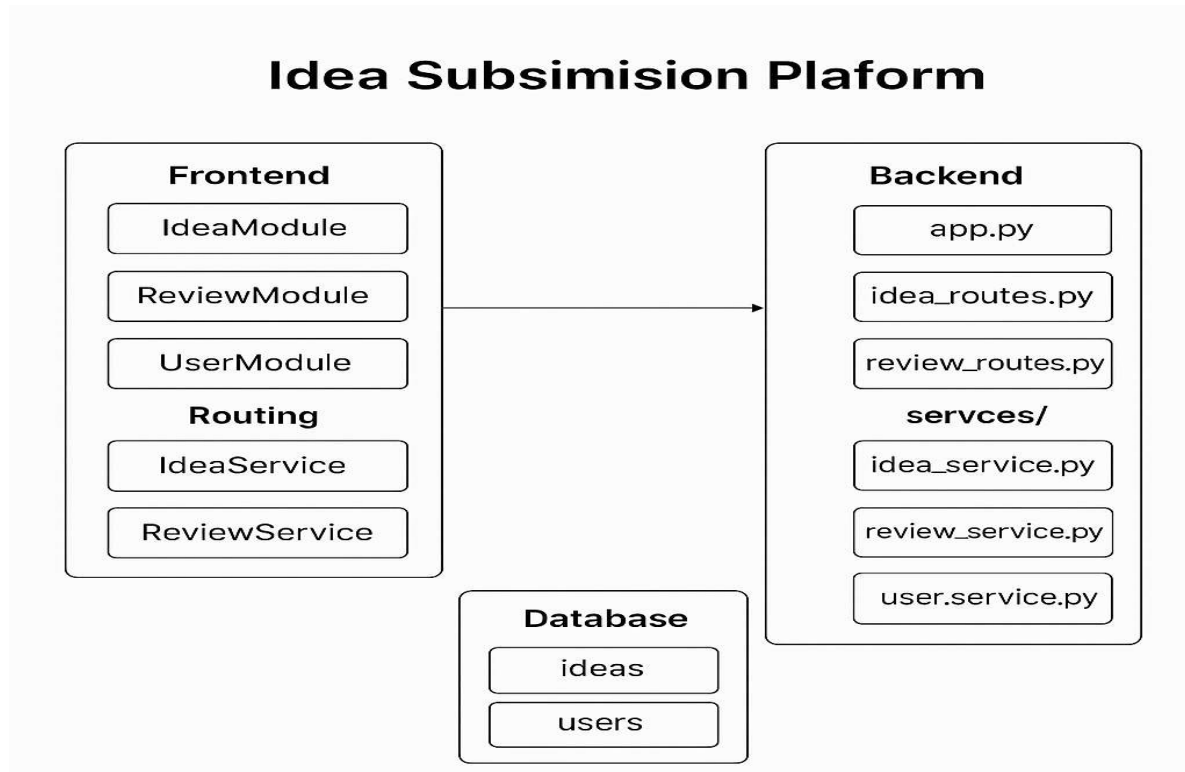
- **Angular** (Frontend): Handles user interactions like adding comics and posting reviews.
- **Flask** (Backend): Acts as an API server to manage data flow and perform **CRUD operations** (Create, Read, Update, Delete).
- **MongoDB** (Database): Stores comic details and user reviews in a flexible NoSQL format.

2.2 UML Diagram



1. Frontend (HTML/CSS/JavaScript + AJAX)	2. Backend (Flask)
<ul style="list-style-type: none"> • UserComponent <ul style="list-style-type: none"> • viewIdeas() – Display all submitted ideas • submitIdea() – Submit a new idea with details • ProfileComponent <ul style="list-style-type: none"> • viewUserIdeas() – Show ideas submitted by the • IdeaService (AJAX-based) <ul style="list-style-type: none"> • getIdeas() – Fetch all ideas from the backend • postIdea() – Send a new idea to the backend • postComment() – Submit a comment on an idea • voteIdea() – Upvote an idea 	<ul style="list-style-type: none"> • IdeaModel <ul style="list-style-type: none"> • id • title • description • category • author (username/email) • comments: List[CommentModel] • votes: int • CommentModel <ul style="list-style-type: none"> • username • text • timestamp
3. Database (MongoDB)	
<ul style="list-style-type: none"> • Ideas Collection <ul style="list-style-type: none"> • title • description • category • author • votes • comments: [{ username, text, timestamp }] 	

2.3 URL Diagram



- Frontend (Angular + TypeScript)
 - Components let users view, add comics, and submit reviews.
 - ComicService and ReviewService handle API calls.
- Backend (Flask)
 - comic_routes.py and review_routes.py define endpoints.
 - comic_service.py and review_service.py handle DB logic.
 - MongoDB stores comics and their reviews.
- Database (MongoDB)
 - One collection: comics, each with a list of embedded reviews.
- Flow:
Angular UI → Flask API → MongoDB → Flask Response → Angular UI

2.4 Hardware Requirements

1. CPU: Quad-core processor or higher
2. RAM: 16 GB or higher Storage: SSD with at least 500 GB
3. Network: High-speed internet connection
4. User Devices: Any modern computer

2.5 Software Requirements

Languages: Angular, TypeScript, Flask, Mongoddb

1. Frontend Development

Frameworks and Libraries:

- **Angular** – for building dynamic and component-based user interfaces
- **TypeScript** – for writing structured and scalable frontend logic
- **CSS** – for custom styling and layout design
- **Flask** – used as a lightweight backend API server (also interacts with frontend in some parts)

Tools:

- **Visual Studio Code** – code editor for development
- **Node.js** – for managing Angular dependencies and build processes

2. Backend Development

Database Management System:

- **MongoDB** – a NoSQL database used to store comic data and user reviews in a flexible document-based format
- **Backend Framework:**
- **Flask** – handles RESTful API creation, manages data flow, and performs CRUD operations with MongoDB

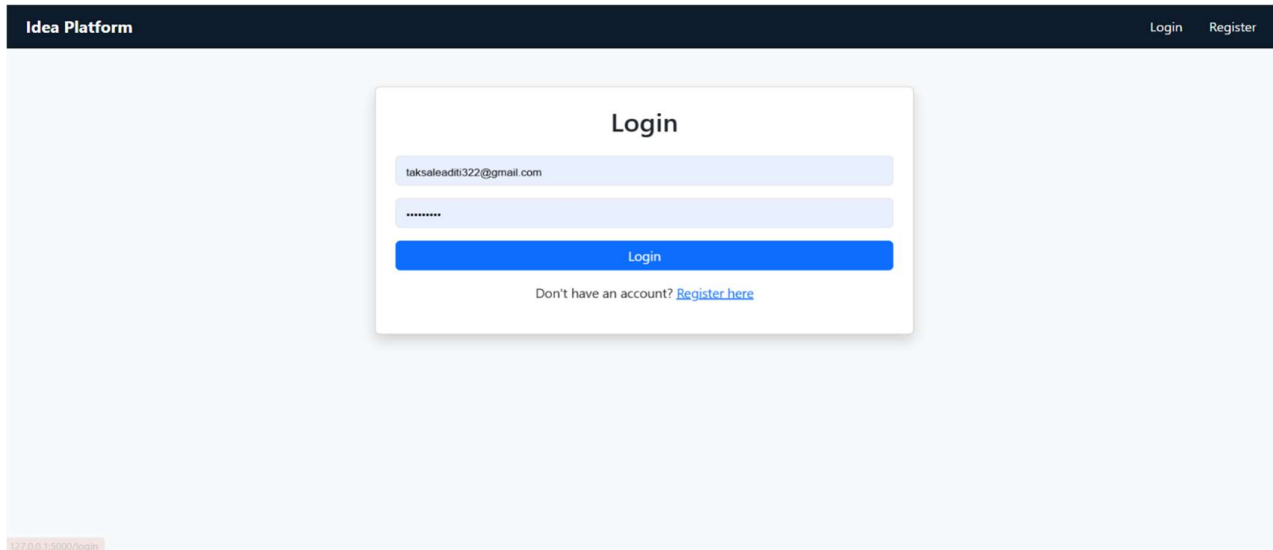
3. Development and Hosting-

Hosting Platform:- Netlify

Chapter 3: Results

3.1 Results of Implementation:

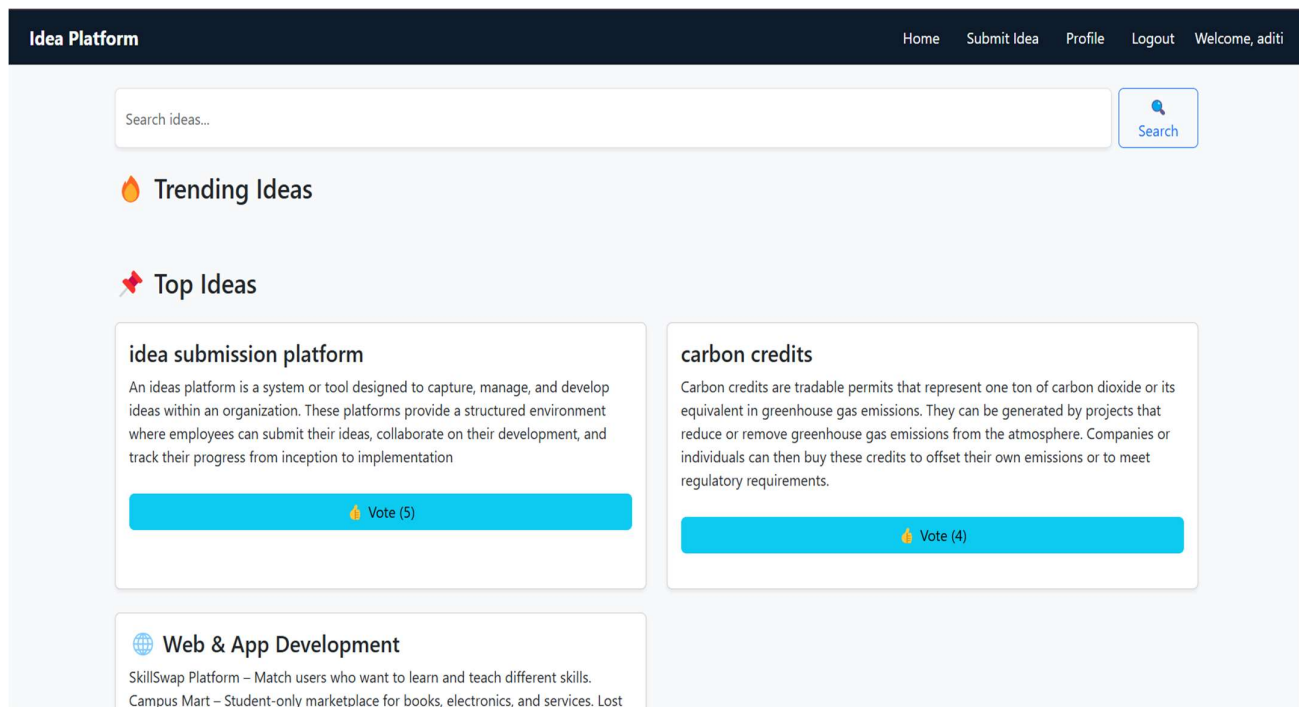
LoginPage:



The screenshot shows the login page of the 'Idea Platform'. At the top, a dark blue header contains the text 'Idea Platform' on the left and 'Login Register' on the right. The main content area is light blue and features a white login box in the center. Inside the box, the title 'Login' is at the top. Below it are two input fields: the first contains the email 'taksaleaditi322@gmail.com' and the second contains masked characters '*****'. A blue 'Login' button is positioned below the password field. At the bottom of the box, there is a link that says 'Don't have an account? [Register here](#)'. In the bottom left corner of the page, there is a small red status bar with the text '127.0.0.1:5000/login'.

This is the login page where user can login using Google or email address

HOME Page:



The screenshot displays the home page of the 'Idea Platform'. The top dark blue header includes 'Idea Platform' on the left and navigation links 'Home', 'Submit Idea', 'Profile', 'Logout', and 'Welcome, aditi' on the right. Below the header is a search bar with the placeholder text 'Search ideas...' and a blue 'Search' button. The main content area is light blue and features two sections: 'Trending Ideas' with a flame icon and 'Top Ideas' with a red pin icon. Under 'Trending Ideas', there are two idea cards. The first card is titled 'idea submission platform' and describes it as a system for capturing, managing, and developing ideas within an organization. It has a blue 'Vote (5)' button. The second card is titled 'carbon credits' and explains that they are tradable permits representing one ton of carbon dioxide. It has a blue 'Vote (4)' button. At the bottom, there is a section titled 'Web & App Development' with a globe icon, which lists 'SkillSwap Platform' and 'Campus Mart' as examples of platforms.

TO SUBMIT IDEA

Idea Platform

HomeSubmit IdeaProfileLogoutWelcome, aditi

Submit New Idea

Title

Description

Describe your idea here...

Source Link (Optional)

Submit Idea

Profile page

Idea Platform

HomeSubmit IdeaProfileLogoutWelcome,

Your Profile

Name:

Email: taksaleaditi322@gmail.com

Total Ideas Submitted: 2

Your Ideas

idea submission platform

Web & App Development

Votes: 1

Description: SkillSwap Platform – Match users who want to learn and teach different skills. Campus Mart – Student-only marketplace for books, electronics, and services. Lost & Found Tracker – A web app for reporting and finding lost items on campus. Peer Tutoring Platform – Schedule sessions, rate tutors, track progress. EventHub – All-in-one college event management and RSVP system.

In Backend(Using MongoDB):

The screenshot shows the MongoDB Atlas web interface. On the left is a sidebar with navigation options: Overview, Data Explorer (selected), Real Time, Cluster Metrics, Query Insights, Performance Advisor, Command Line Tools, and Infrastructure as Code. The main panel displays the 'Cluster0' view for the 'idea_db' database. The 'users' collection is selected, showing 4 documents. The interface includes a search bar, a 'Filter' input, and a 'Query Results' section displaying two user documents. The first document has fields: _id, username, email, and password. The second document has fields: _id, username, email, and password. The bottom of the interface shows the system status as 'All Good' and copyright information for MongoDB, Inc.

Cluster0

idea_db.users

STORAGE SIZE: 36KB LOGICAL DATA SIZE: 102KB TOTAL DOCUMENTS: 4 INDEXES TOTAL SIZE: 36KB

Find Indexes Schema Anti-Patterns Aggregation Search Indexes

Generate queries from natural language in Compass

INSERT DOCUMENT

Filter Type a query: { field: 'value' } Reset Apply Options

QUERY RESULTS: 1-4 OF 4

```
{
  "_id": "ObjectId('67fec5e426b59310f9c9fbf69')",
  "username": "aditti",
  "email": "2022.aditi.taksale@ves.ac.in",
  "password": "script:32768:8:1$9z0C4xcx0Lt5ynZD$8021416973c020a5369e3296ae0889312d7..."
}
```

```
{
  "_id": "ObjectId('67ff8490e5b54d098dfdbeb6')",
  "username": "prathmesh_222",
  "email": "taksaleaditi322@gmail.com",
  "password": "script:32768:8:1$9z0C4xcx0Lt5ynZD$8021416973c020a5369e3296ae0889312d7..."
}
```

System Status: All Good

©2025 MongoDB, Inc. Status Terms Privacy Atlas Blog Contact Sales

The screenshot shows the MongoDB Atlas web interface for the 'idea_db' database, specifically the 'ideas' collection. The left sidebar shows the 'Data Explorer' section with 'idea_db' expanded, showing 'ideas' and 'users' collections. The main panel displays the 'Find' tab for the 'ideas' collection. The 'Filter' input is empty. The 'Query Results' section displays two documents. The first document has fields: _id, title, description, votes, user_id, and username. The second document has fields: _id and title. The bottom of the interface shows the system status as 'All Good' and copyright information for MongoDB, Inc.

idea_db

ideas

users

Find Indexes Schema Anti-Patterns Aggregation Search Indexes

Generate queries from natural language in Compass

INSERT DOCUMENT

Filter Type a query: { field: 'value' } Reset Apply Options

Project { field: 0 }

Sort { field: -1 } or [['field', -1]]

Collation { locale: 'simple' }

```
{
  "_id": "ObjectId('67ff8b22752f912b3cedd3c8')",
  "title": "idea submission platform",
  "description": "An ideas platform is a system or tool designed to capture, manage, and...",
  "votes": 5,
  "user_id": "67ff8490e5b54d098dfdbeb6",
  "username": "prathmesh_222"
}
```

```
{
  "_id": "ObjectId('67ff927d752f912b3cedd3c9')",
  "title": "Web & App Development"
}
```


Chapter 4 Conclusion

The Idea Submission Platform effectively integrates modern web technologies to provide an engaging and functional space for users to share, explore, and interact with innovative ideas. By utilizing Flask for backend development, MongoDB for flexible and scalable data storage, and a responsive frontend built with HTML, CSS, JavaScript, and AJAX, the platform offers a smooth and intuitive user experience.

This project showcases the capabilities of full-stack development by combining modular backend logic, dynamic client-side rendering, and efficient API communication. It emphasizes the importance of interactivity, collaboration, and accessibility in platforms designed to foster creativity and innovation. Additionally, it highlights the value of clean UI design, seamless data handling, and scalability in building modern web-based applications.

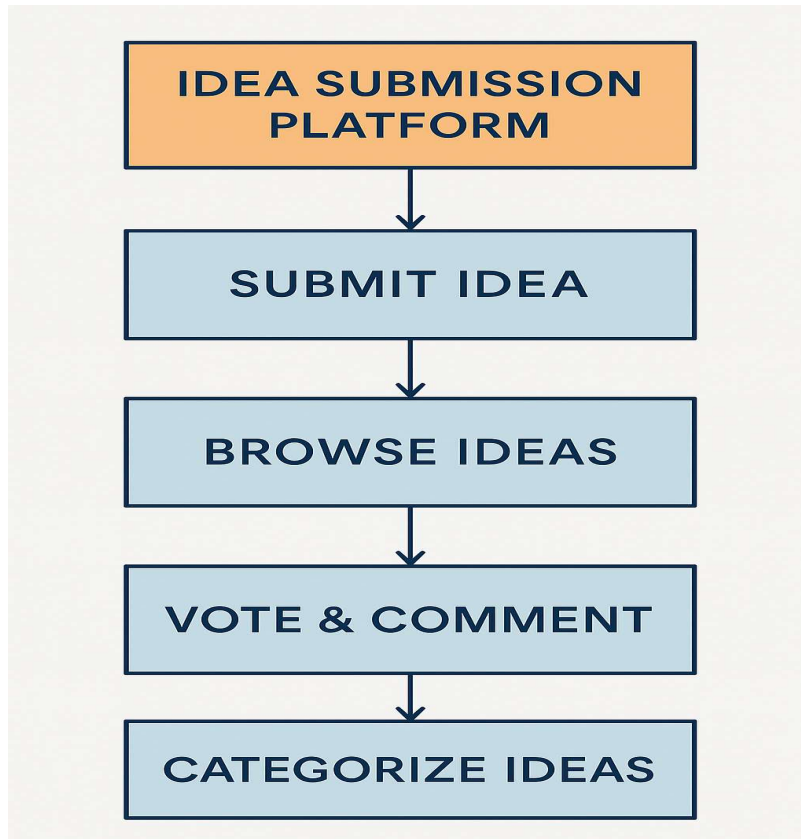
4.1 Reference:

- [1] Angular: https://youtu.be/0LhBvp8qpro?si=NBads_TQ6T_wyoew
- [2] Flask: <https://youtu.be/oA8brF3w5XQ?si=sx1v6m9ZdxElumzK>
- [3] Deploy: https://youtu.be/9srnyNC1e_o?si=2aRlo9OPAfKlyVpw
- [4] MongoDB: https://youtu.be/I6mDkcqU_ZE?si=8v90ka3fFse4UUUU

Chapter 2

Design and Implementation

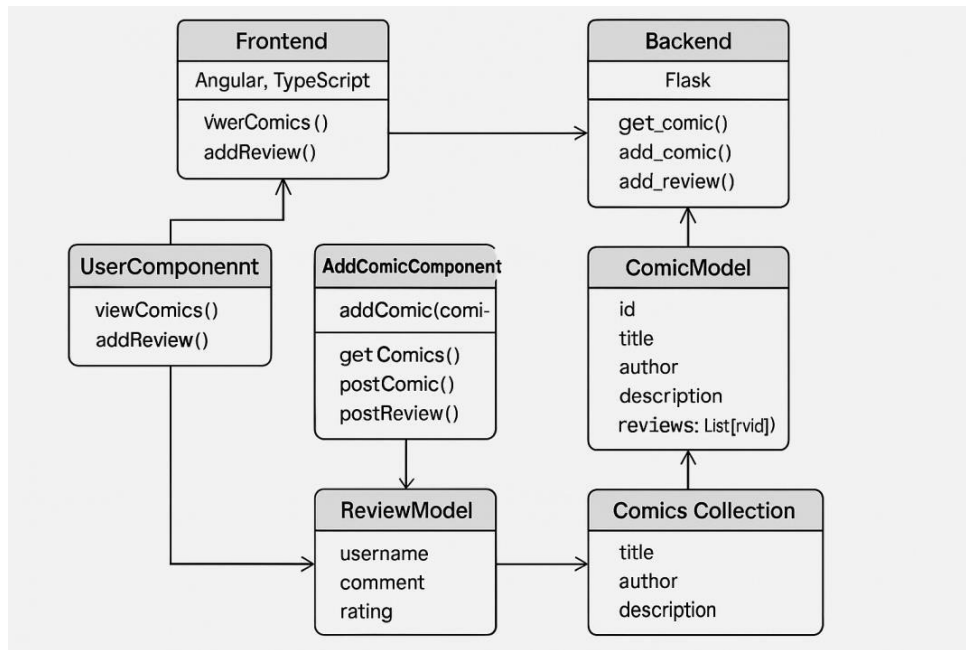
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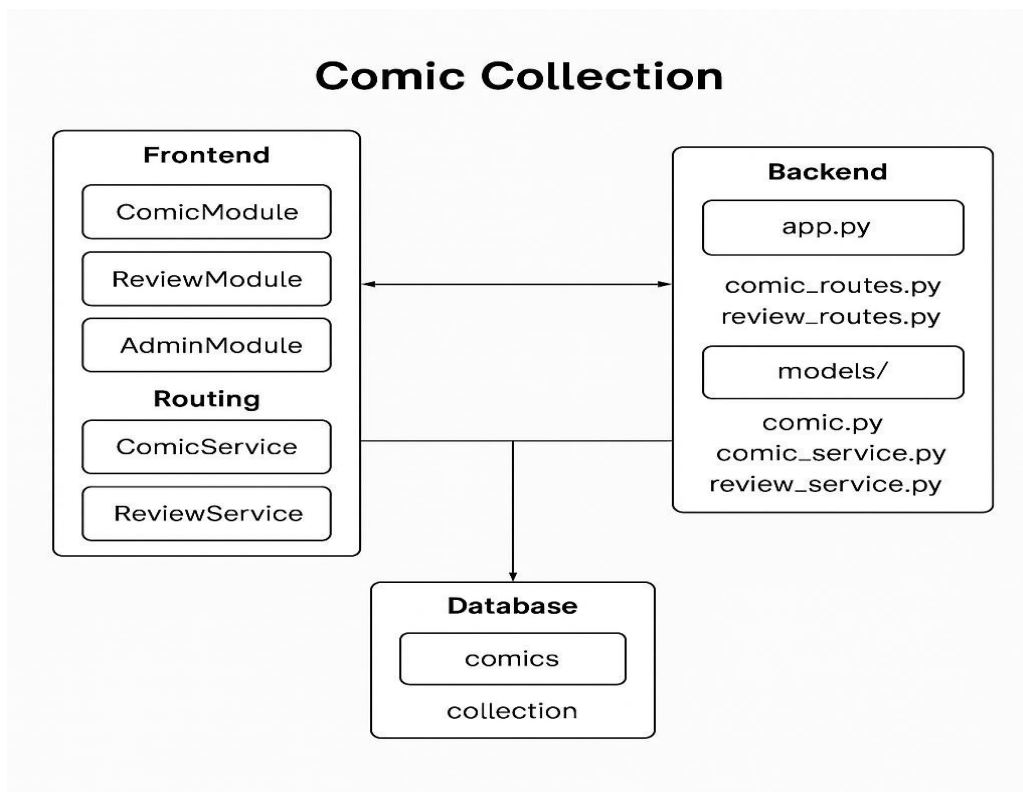
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- **MongoDB** (Database): Stores comic details and user reviews in a flexible NoSQL format.

2.7 UML Diagram



<p>2. Frontend (Angular - TypeScript)</p> <ul style="list-style-type: none"> UserComponent <ul style="list-style-type: none"> viewComics() addReview() AddComicComponent <ul style="list-style-type: none"> addComic(comicData) ComicService <ul style="list-style-type: none"> getComics() postComic() postReview() 	<p>3. Backend (Flask)</p> <ul style="list-style-type: none"> ComicModel <ul style="list-style-type: none"> id title author description reviews: List[ReviewModel] ReviewModel <ul style="list-style-type: none"> username comment rating
<p>4. Database (MongoDB)</p> <ul style="list-style-type: none"> Comics Collection <ul style="list-style-type: none"> title author description reviews [{ username, comment, rating }] 	

2.8 URL Diagram



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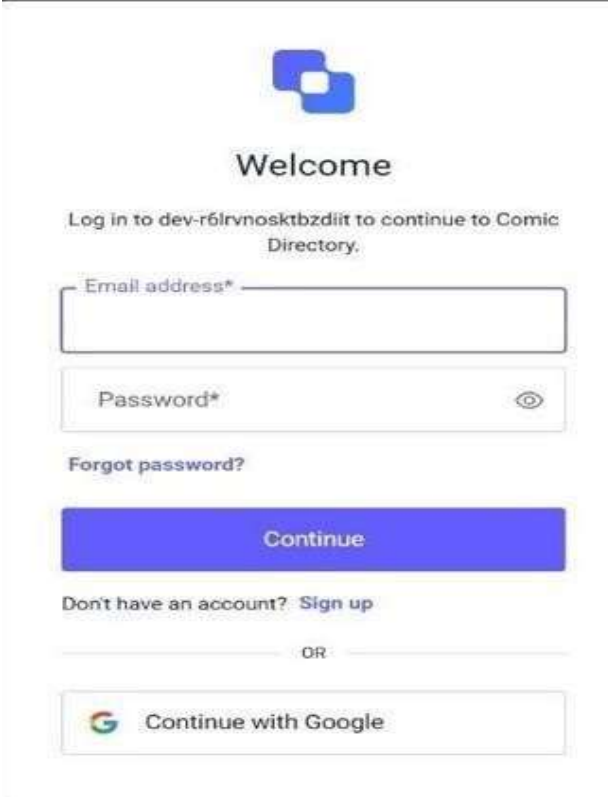
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Hosting Platform:- Netlify

Chapter 3: Results

3.1 Results of Implementation:

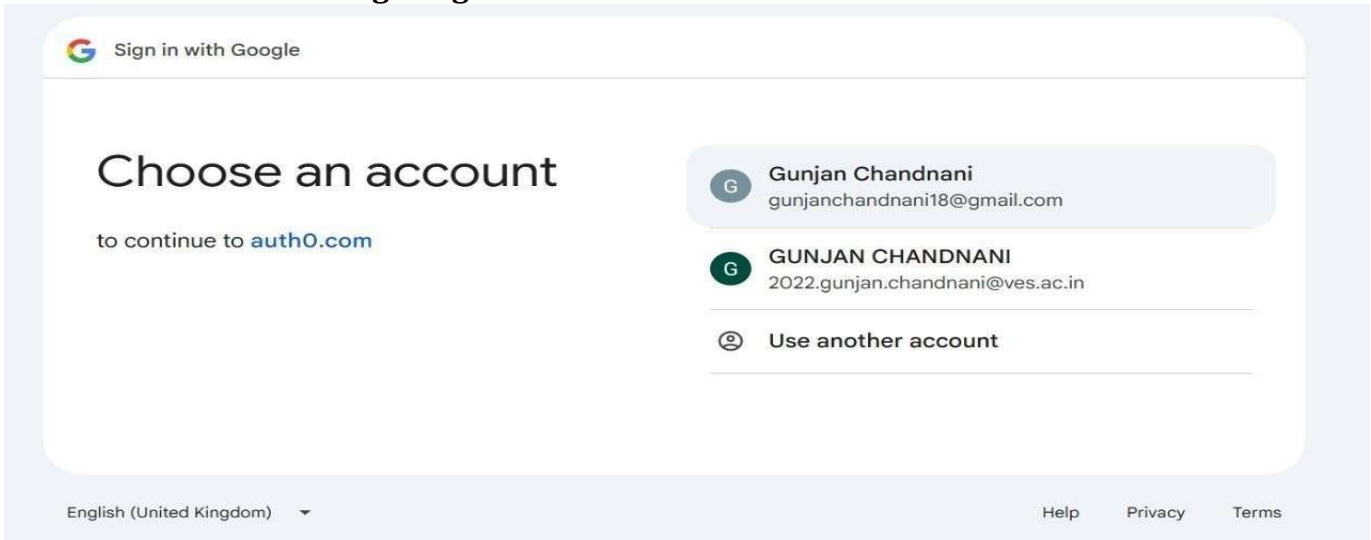
LoginPage:



The login page features a blue logo at the top, followed by the heading "Welcome". Below this is a message: "Log in to dev-r6lrnosktbzdiit to continue to Comic Directory." The form includes two input fields: "Email address*" and "Password*", with an eye icon for password visibility. A link for "Forgot password?" is positioned below the password field. A prominent blue "Continue" button is centered below the inputs. At the bottom, there is a "Sign up" link for users without an account, an "OR" separator, and a "Continue with Google" button featuring the Google logo.

This is the login page where user can login using Google or email address

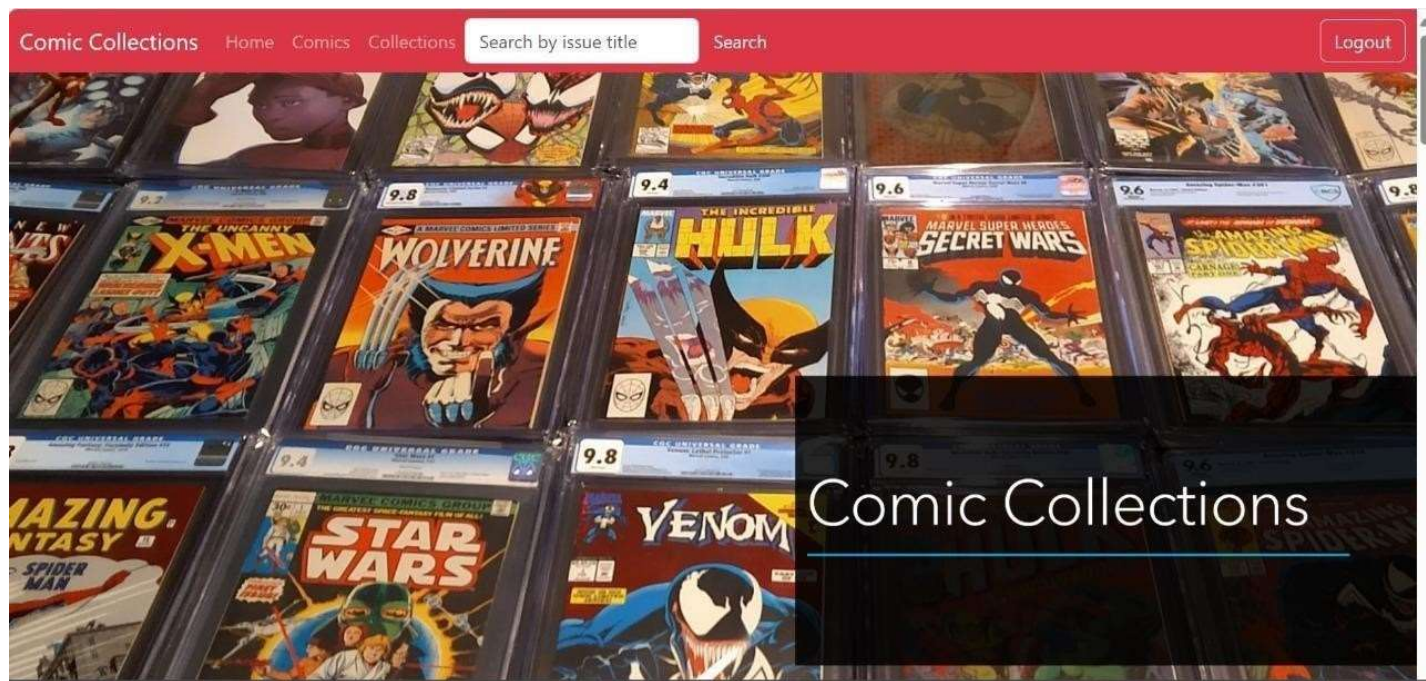
When User Continue using Google:



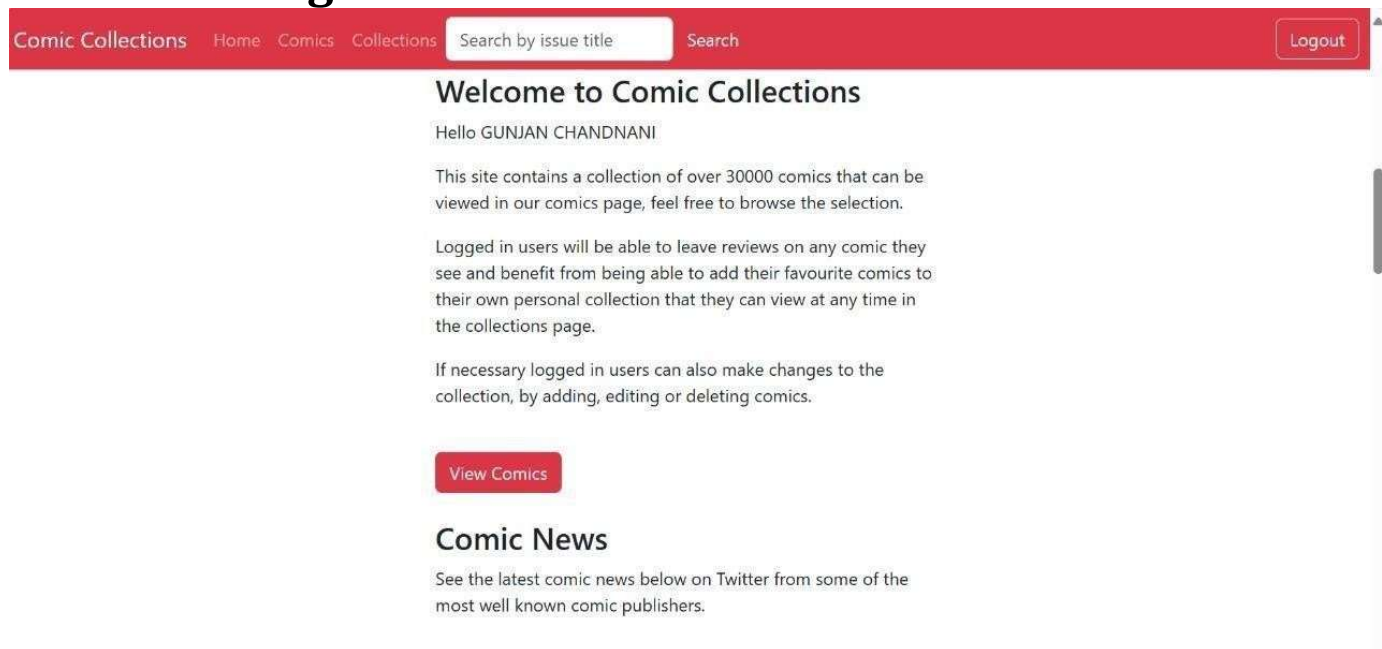
This screen is titled "Sign in with Google" and "Choose an account to continue to auth0.com". It displays a list of accounts for selection. The first account is "Gunjan Chandnani" with the email "gunjanchandnani18@gmail.com". The second account is "GUNJAN CHANDNANI" with the email "2022.gunjan.chandnani@ves.ac.in". Below these is a link to "Use another account". The footer contains the language selection "English (United Kingdom)", and links for "Help", "Privacy", and "Terms".

Account Name	Email Address
Gunjan Chandnani	gunjanchandnani18@gmail.com
GUNJAN CHANDNANI	2022.gunjan.chandnani@ves.ac.in

Home Page:



Collection Page:



Comic Page:

[Comic Collections](#) [Home](#) [Comics](#) [Collections](#)

Comics

View our variety of comics below, click a comic to get more information about it.

Not finding what you're looking for? Use the search bar within the navigation to narrow the list.

<100

<50

<25

<1

1>

25>

50>

100>

Page | 1

When User Click on Add New Comic:

[Comic Collections](#) [Home](#) [Comics](#) [Collections](#)

Add a new comic

Issue Title

Gunjan Book

Issue Description

This is Gunjan Book

Publish Date

2/3/2004

Writer

Gunjan Chandnani

Penciler

hush

Cover Artist

Gunjan

Image (Optional)

https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww

In Backend(Using Mongodb):

Type a query: { field: 'value' } or [Generate query](#)

Explain

Reset

Find

</>

Options

ADD DATA

EXPORT DATA

UPDATE

DELETE

251 - 4 of 4

```
issue_description: "null"
publish_date: "null"
writer: "null"
penciler: "null"
cover_artist: "null"
image_url: "null"
reviews: Array (empty)
review_count: 0
```

```
_id: ObjectId('67f75f07930e5ef276b90f61')
issue_title: "Gunjan's Book"
issue_description: "This is Gunjan Book"
publish_date: "2/3/2004"
writer: "Gunjan Chandnani"
penciler: "hush"
cover_artist: "batman"
image_url: "https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.dc.com%2Fcharacter..."
reviews: Array (2)
review_count: 0
```

Review Page:

Comic Collections

Home

Comics

Collections

Search by issue title

Search

Logout

Review this comic

Name

Please leave your review below

Please leave a rating

You must complete all fields

Review by GUNJAN CHANDNANI

Very nice bbok

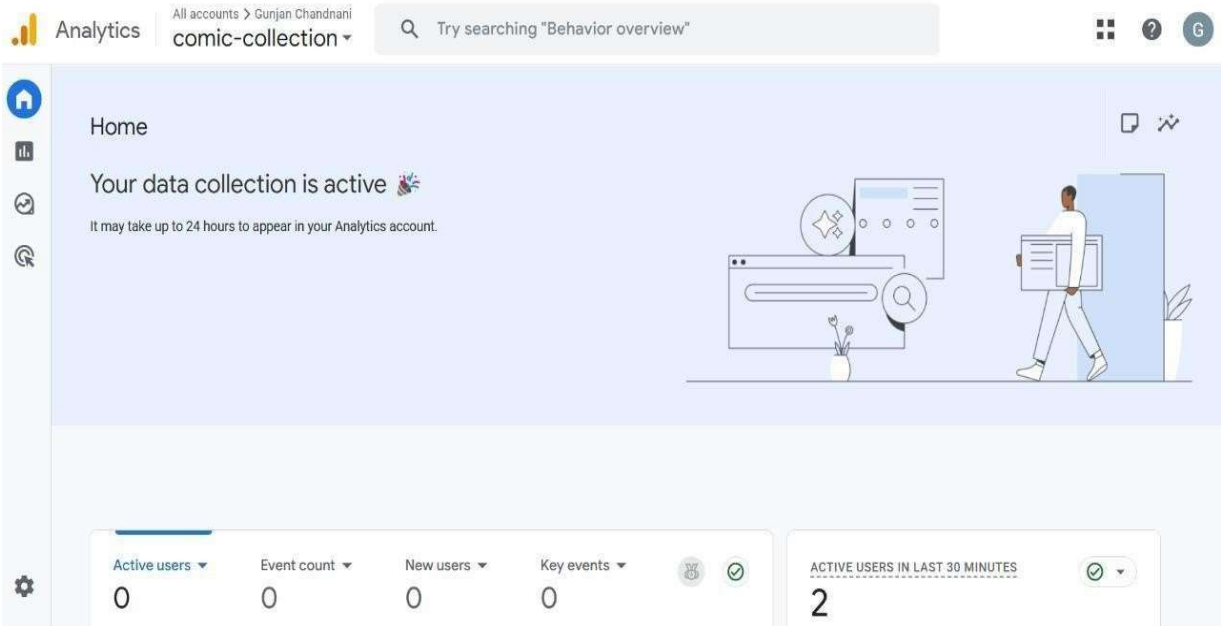
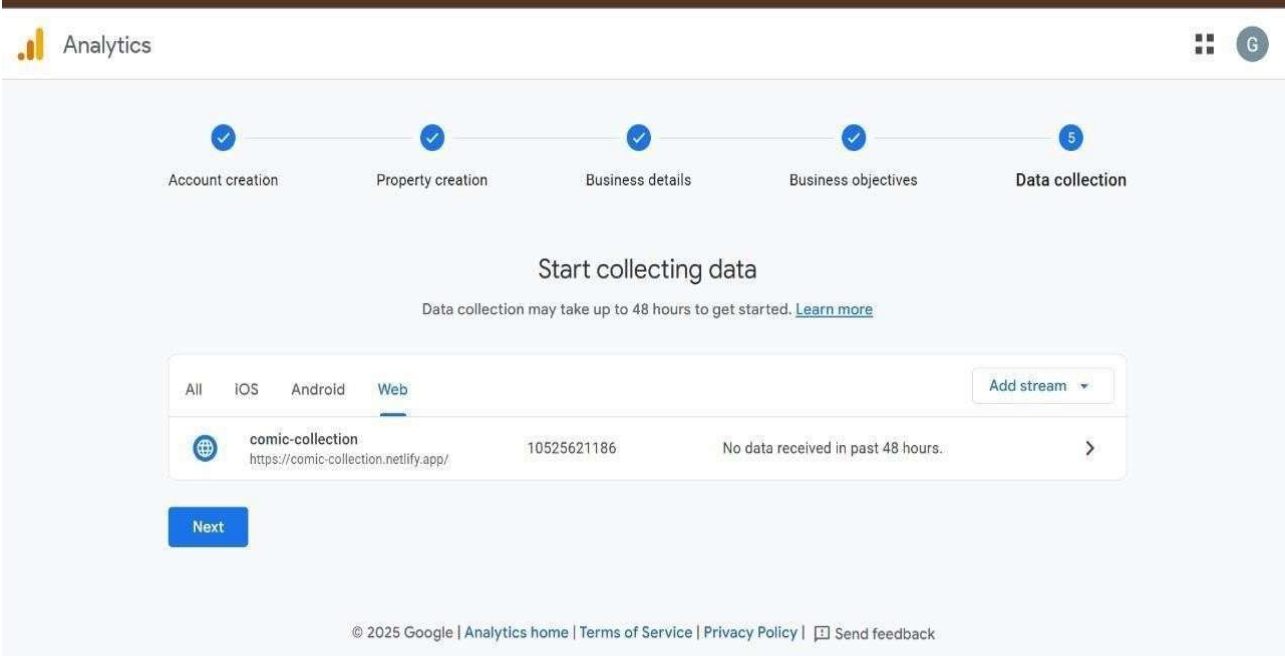
5 stars

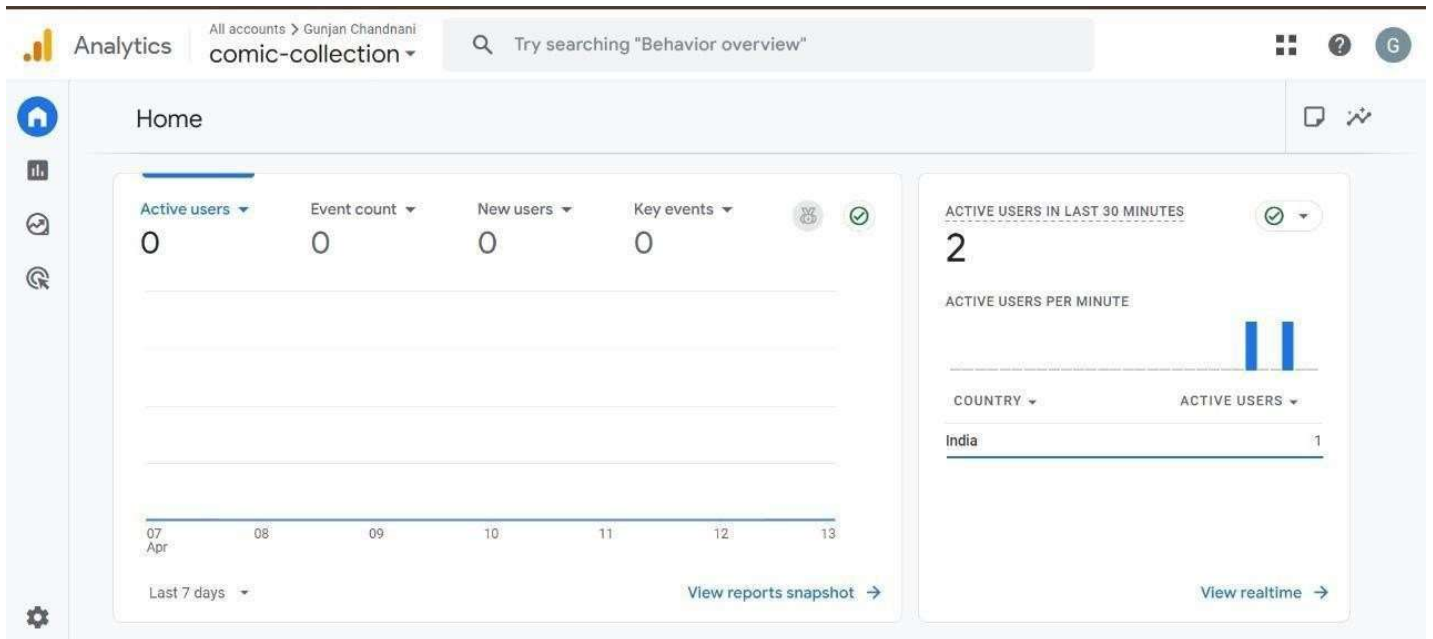
Review by gunjan

Best comic ever

3 stars

3.2 Google Ananlysis





ACTIVE USERS IN LAST 30 MINUTES

2

ACTIVE USERS PER MINUTE

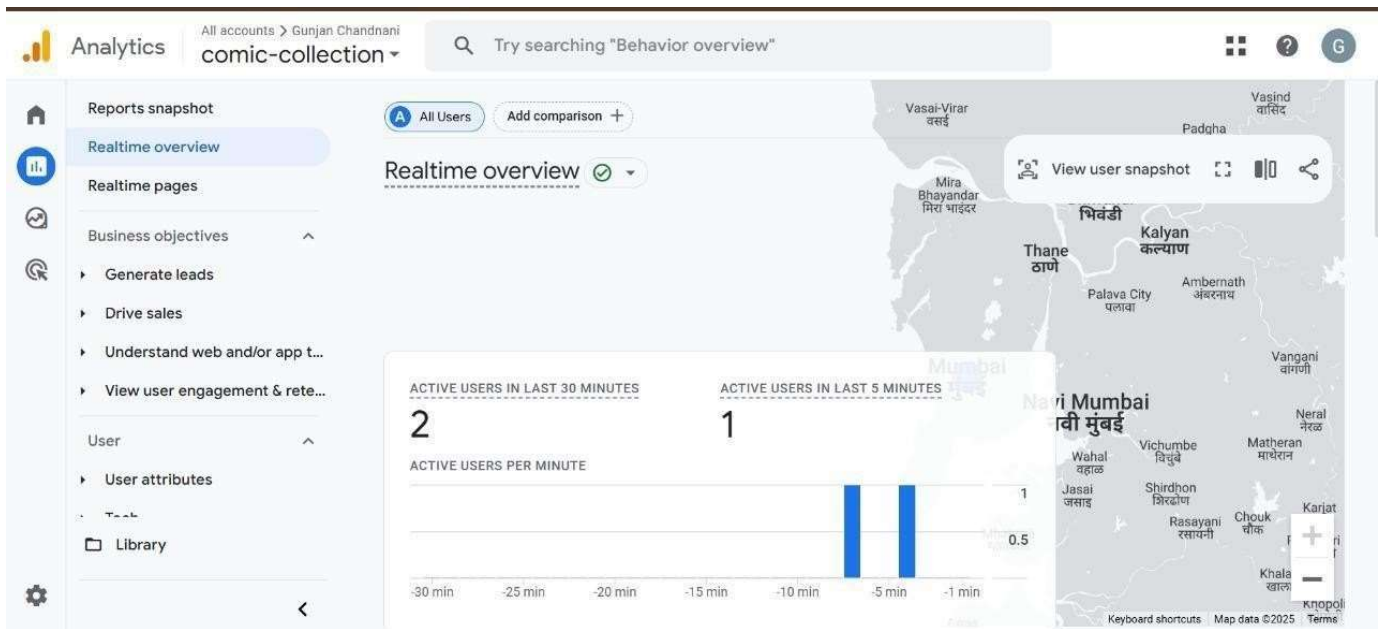
COUNTRY

India

ACTIVE USERS

1

View realtime



Chapter 4

Conclusion

4.2 Conclusion

The Comic Collection and Review Platform successfully integrates modern web technologies to deliver a seamless user experience for comic enthusiasts. By combining **Angular**, **TypeScript**, **CSS**, and **Flask** on the frontend with **MongoDB** on the backend, the platform enables users to effortlessly manage their comic collections, write reviews, and revisit their favorite titles.

This project demonstrates the power of full-stack development using a component-based frontend, efficient RESTful APIs, and a flexible NoSQL database. It also highlights the importance of user-centered design, data management, and scalability in modern web applications.

4.3 Reference:

- [5] Angular: https://youtu.be/0LhBvp8qpro?si=NBads_TQ6T_wyoew
- [6] Flask: <https://youtu.be/oA8brF3w5XQ?si=sx1v6m9ZdxElumzK>
- [7] Deploy: https://youtu.be/9srnyNC1e_o?si=2aRlo9OPAfKlyVpw
- [8] MongoDB: https://youtu.be/J6mDkcqU_ZE?si=8v90ka3fFse4UUUU