INDEX

PART-I
Introduction

1.1 Introduction to project

Project Title: embee

Project Profile

- embee is a blogging platform that allows users to create, manage, and share their content seamlessly. It enables users to register, log in, and maintain their own profile. Users can create posts, save drafts, edit or delete them, and publish drafts when ready. It supports adding, editing, and deleting comments on posts, as well as marking and unmarking posts as favourites for quick access later. The system provides a smooth and responsive interface for easy navigation and ensures a complete CRUD experience for posts, drafts, and comments.

Project Users and Functionalities

User:
- Register and log in using email and password
- Create, edit, and delete drafts
- Publish drafts into posts
- Create, edit, and delete posts
- Mark and unmark posts as favourites
- Add, edit, and delete comments on posts
- View all posts and post details
- View own drafts, posts, and favourites
- Log out securely

1.2 Project Profile

Project Title	embee
Project Type	Web Application
Font End Technologies	React
Back End Technologies	PHP, MySQL
Duration	1 Month
Internal Guide	Pritesh Sir
Submitted By	Shubham Mohapatra

PART-II
SYSTEM ANALYSIS AND DESIGN

2. Project Planning

2.1   Scope of System:

The scope of embee is to provide users with a complete blogging platform where they can create, manage, and share content seamlessly. It covers post management, draft management, comment management, and favourites. The system also handles user authentication, allowing only registered users to perform write operations, while unregistered visitors can still browse and read posts.

Since this system has only one type of user, which is the Registered User, all users have access to the same set of functionalities.

When a Registered User is logged in, they can create, edit, delete, and publish posts and drafts, add and manage comments on any post, and mark or unmark posts as favourites for quick access. They can also view their own profile, drafts, posts, and favourites, and log out securely.

Unregistered users can only view posts and read their content but cannot create drafts or most, comment, or mark favourites until they register and log in.
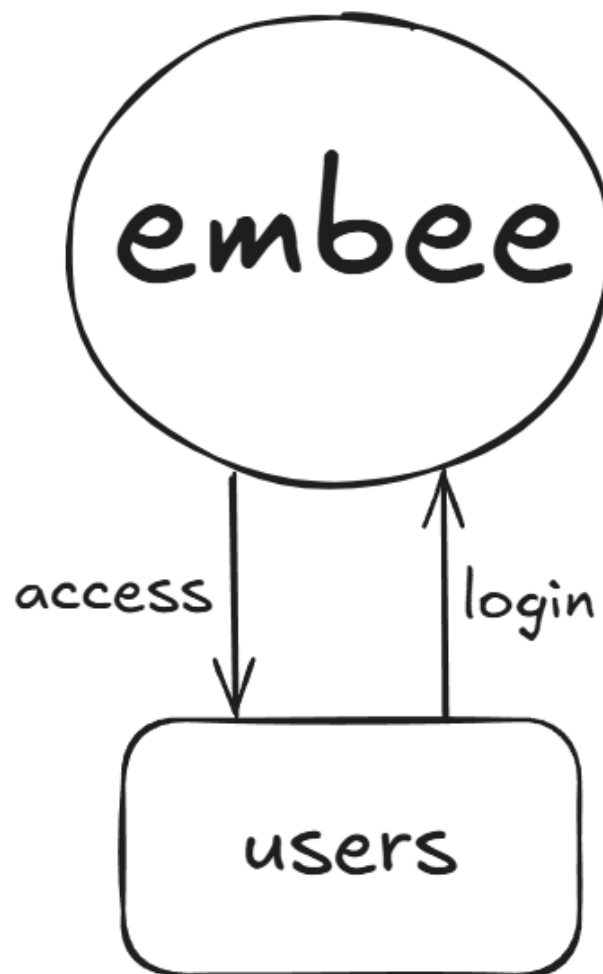
2.2   Project Team

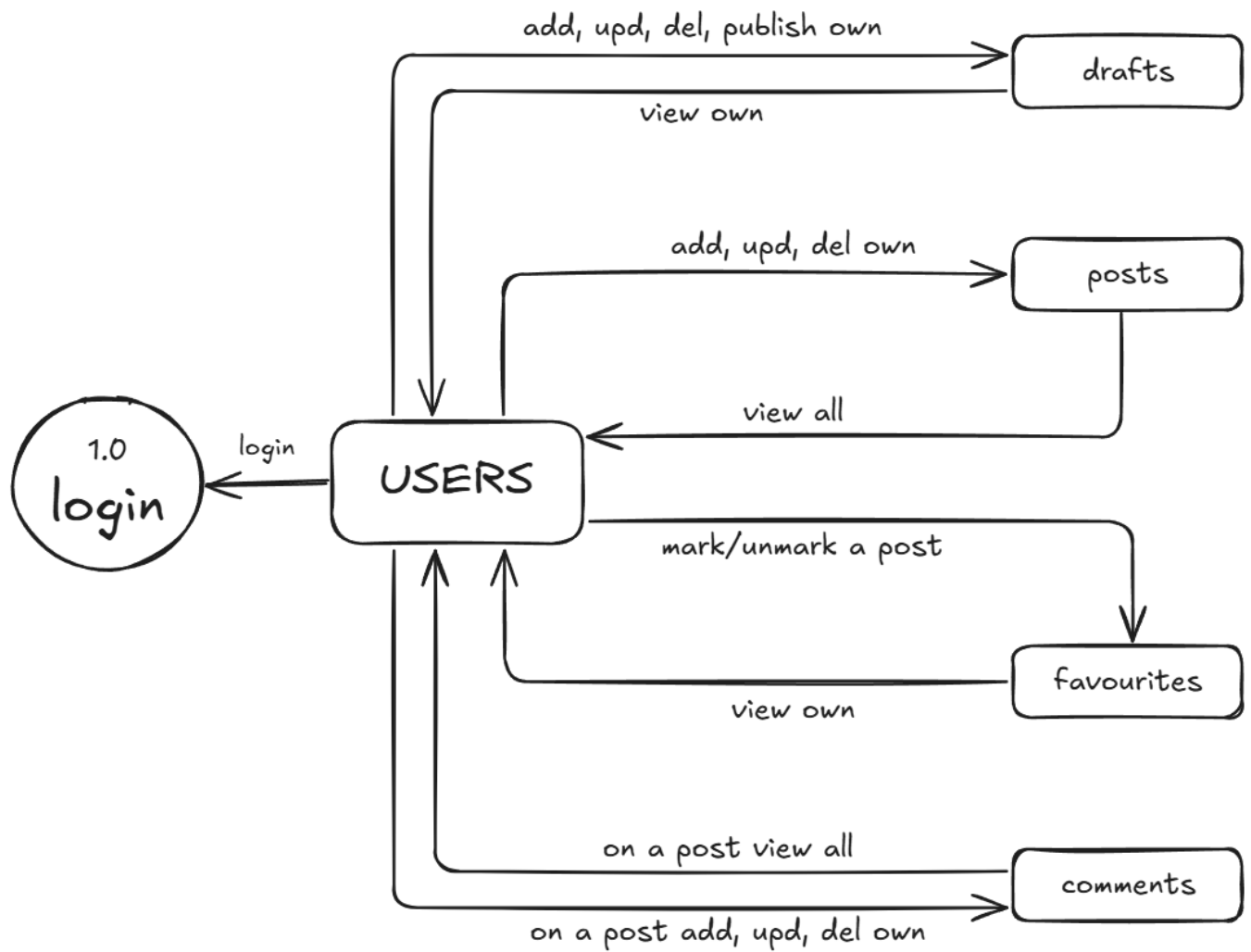| Personal-Profile	
Name	Shubham Mohapatra
Address	Chanod Colony, Vapi, Gujarat.
Contact No.	9726197900
E-Mail Address	shubhammohapatra2005@gmail.com
Exam No	40

3. SYSTEM DESIGN :
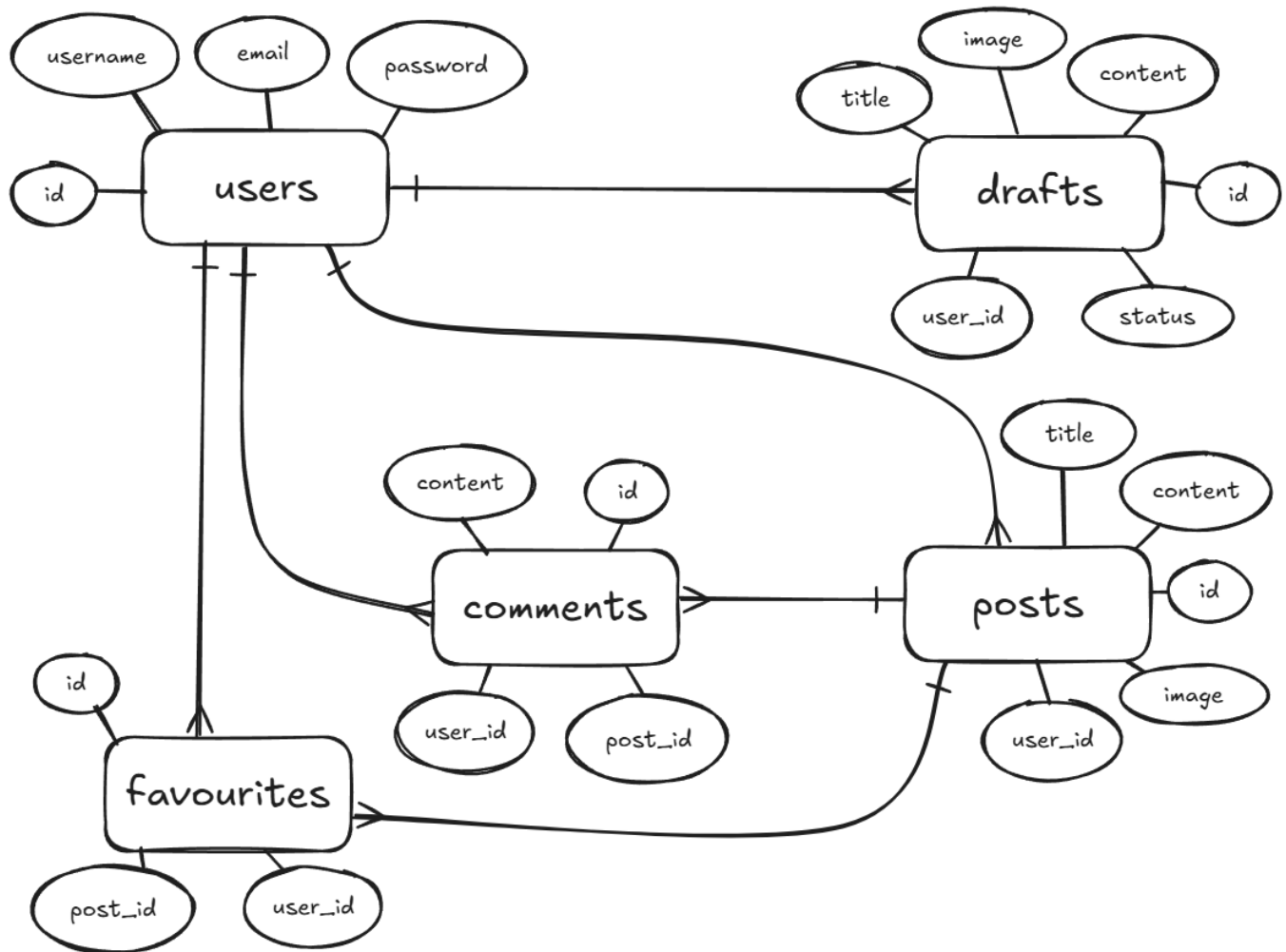
3.1   Data Flow Diagram

0-LEVEL DFD

LEVEL-1 DFD

3.2   ER DIAGRAM

3.3   DATABASE DESIGN

Users Table:

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action		
☐	1	id 🔑	int			No	None		AUTO_INCREMENT	🖉 Change	⊝ Drop	More
☐	2	username	varchar(20)	utf8mb4_0900_ai_ci		No	None			🖉 Change	⊝ Drop	More
☐	3	email	varchar(30)	utf8mb4_0900_ai_ci		No	None			🖉 Change	⊝ Drop	More
☐	4	password	tinytext	utf8mb4_0900_ai_ci		No	None			🖉 Change	⊝ Drop	More

Drafts Table:

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action		
☐	1	id 🔑	int			No	None		AUTO_INCREMENT	🖉 Change	⊝ Drop	More
☐	2	user_id	int			No	None			🖉 Change	⊝ Drop	More
☐	3	title	tinytext	utf8mb4_0900_ai_ci		No	None			🖉 Change	⊝ Drop	More
☐	4	image	tinytext	utf8mb4_0900_ai_ci		No	None			🖉 Change	⊝ Drop	More
☐	5	content	text	utf8mb4_0900_ai_ci		No	None			🖉 Change	⊝ Drop	More
☐	6	status	varchar(10)	utf8mb4_0900_ai_ci		No	None			🖉 Change	⊝ Drop	More

Posts Table:

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action		
☐	1	id 🔑	int			No	None		AUTO_INCREMENT	🖉 Change	⊝ Drop	More
☐	2	title	tinytext	utf8mb4_0900_ai_ci		No	None			🖉 Change	⊝ Drop	More
☐	3	image	tinytext	utf8mb4_0900_ai_ci		No	None			🖉 Change	⊝ Drop	More
☐	4	content	text	utf8mb4_0900_ai_ci		No	None			🖉 Change	⊝ Drop	More
☐	5	user_id	int			No	None			🖉 Change	⊝ Drop	More

Favourites Table:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action		
☐	1	id 🔑	int			No	None		AUTO_INCREMENT	🖊 Change	⊝ Drop	More
☐	2	user_id	int			No	None			🖊 Change	⊝ Drop	More
☐	3	post_id	int			No	None			🖊 Change	⊝ Drop	More

Comments Table:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action		
☐	1	id 🔑	int			No	None		AUTO_INCREMENT	🖊 Change	⊝ Drop	More
☐	2	content	text	utf8mb4_0900_ai_ci		No	None			🖊 Change	⊝ Drop	More
☐	3	post_id	int			No	None			🖊 Change	⊝ Drop	More
☐	4	user_id	int			No	None			🖊 Change	⊝ Drop	More

PART-III

Implementation

Details

4. <u>Screen Layout</u>

1. Login Page
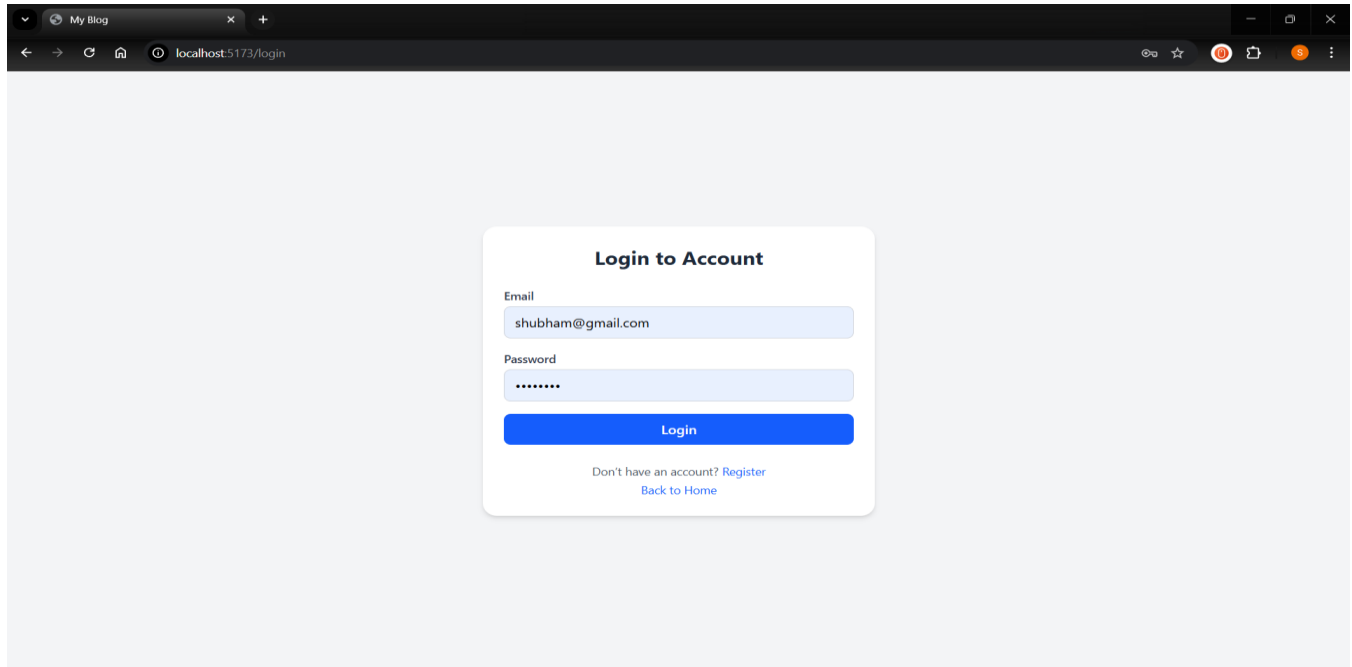
2. Home Page

3. Create Draft Page

embee

Hi, shubham   ⭐ Favourites   ▤ Drafts   **CREATE POST**   LOGOUT
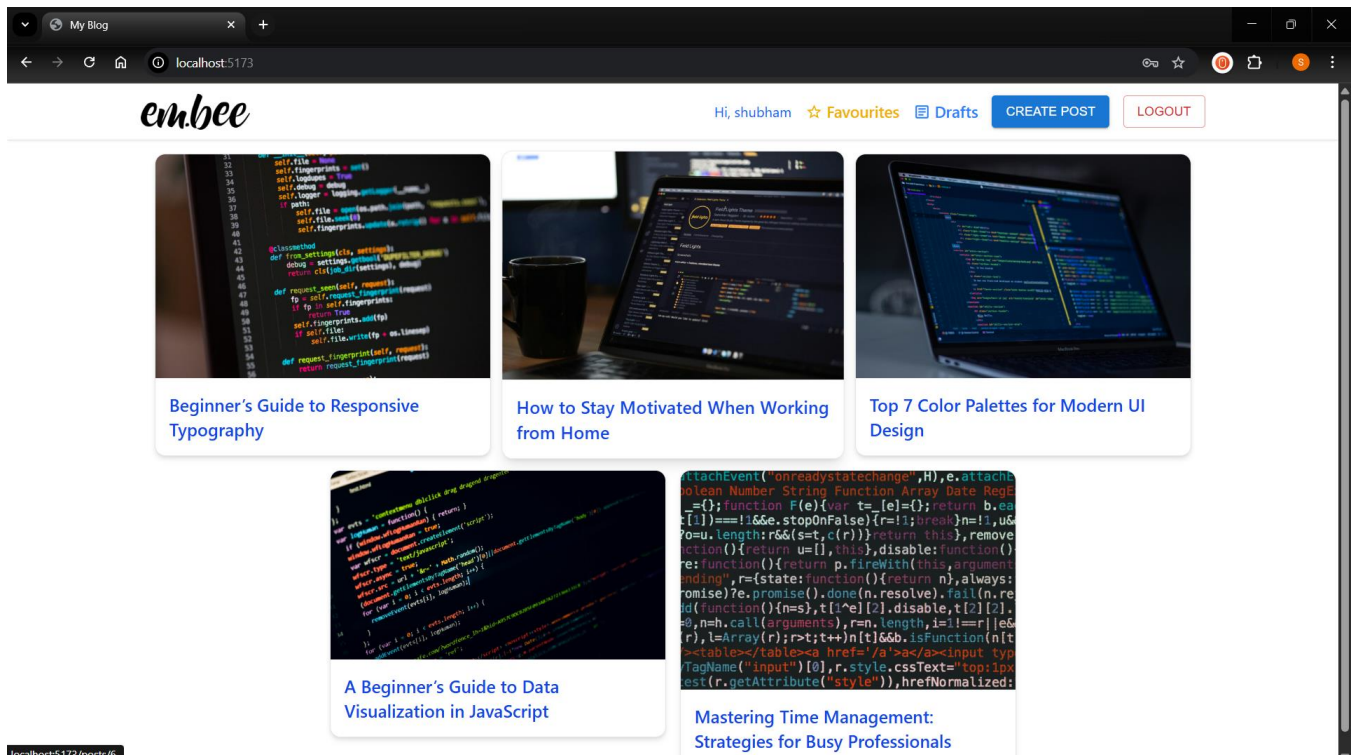
▤ New Draft

✎ Title

Understanding Micro-Interactions in UX Design

🖼 Upload Image

Choose File 06.jpg

▤ Content

Micro-interactions are subtle design elements that improve the user experience. Learn what micro-interactions are, why they matter, and how to implement them using CSS and JavaScript. See real-world examples and best practices for making your interfaces more engaging.

Save Draft

4. All Drafts

embee

Hi, shubham   ⭐ Favourites   ▤ Drafts   **CREATE POST**   LOGOUT

Your Drafts

📄 NEW DRAFT

1 draft

Understanding Micro-Interactions in UX Design

draft

Micro-interactions are subtle design elements that improve the user experience. Learn what micro-interactions are, why they matter, and how to implement them using CSS and JavaScript. See real-world examples and best...
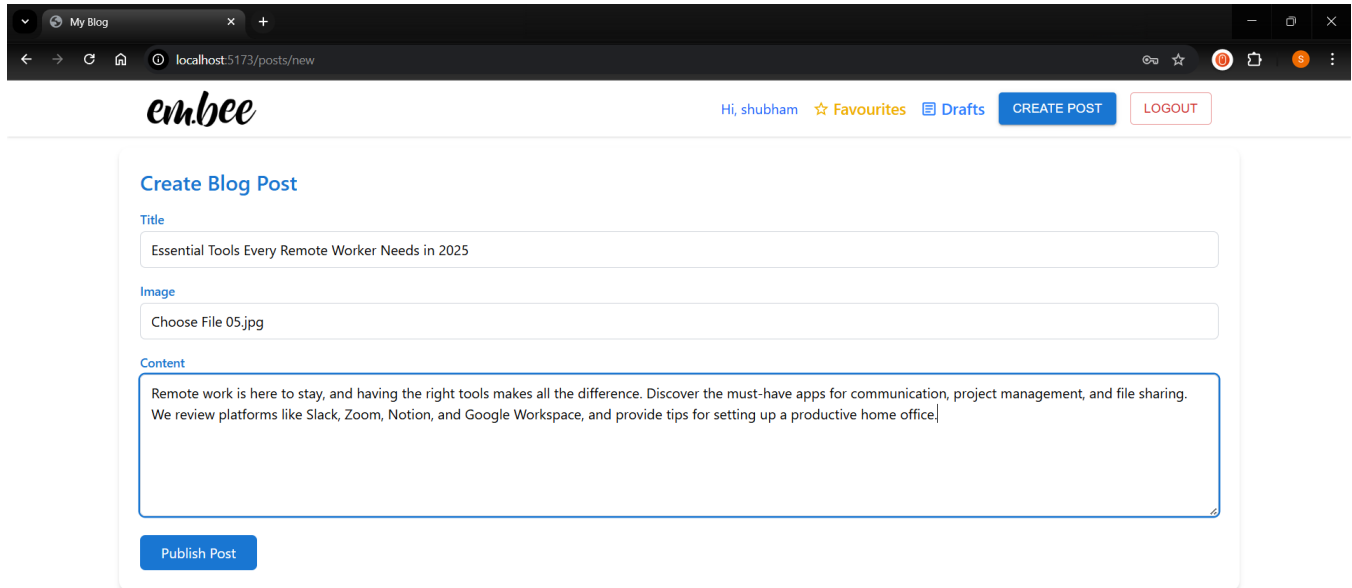
5. Draft Details Page
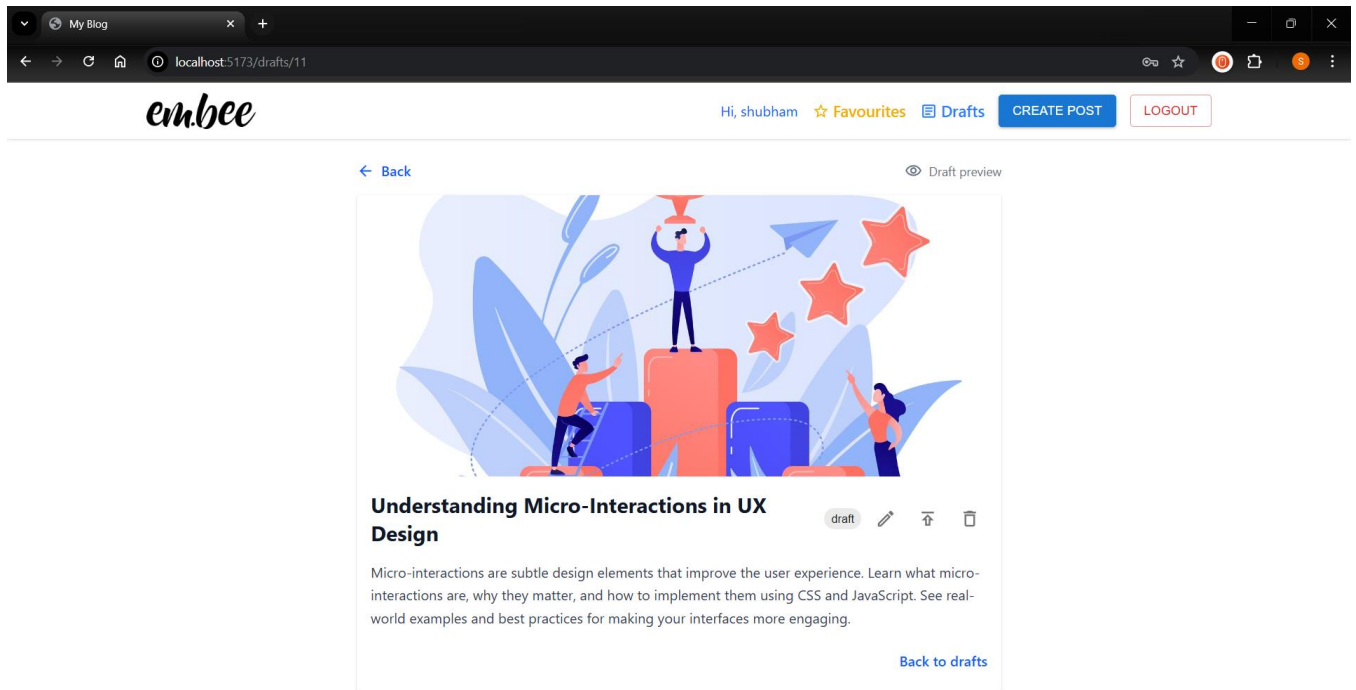
6. Edit Draft Page
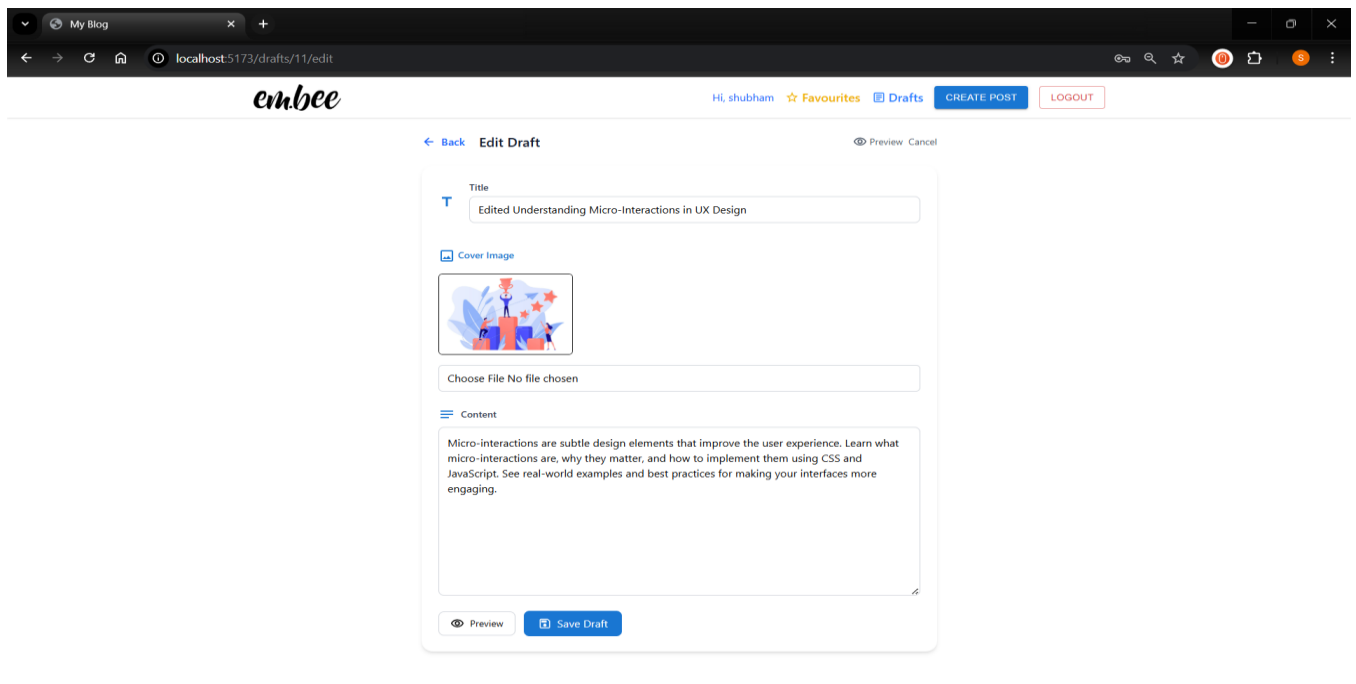
7. Create Post Page

8. All Posts Page
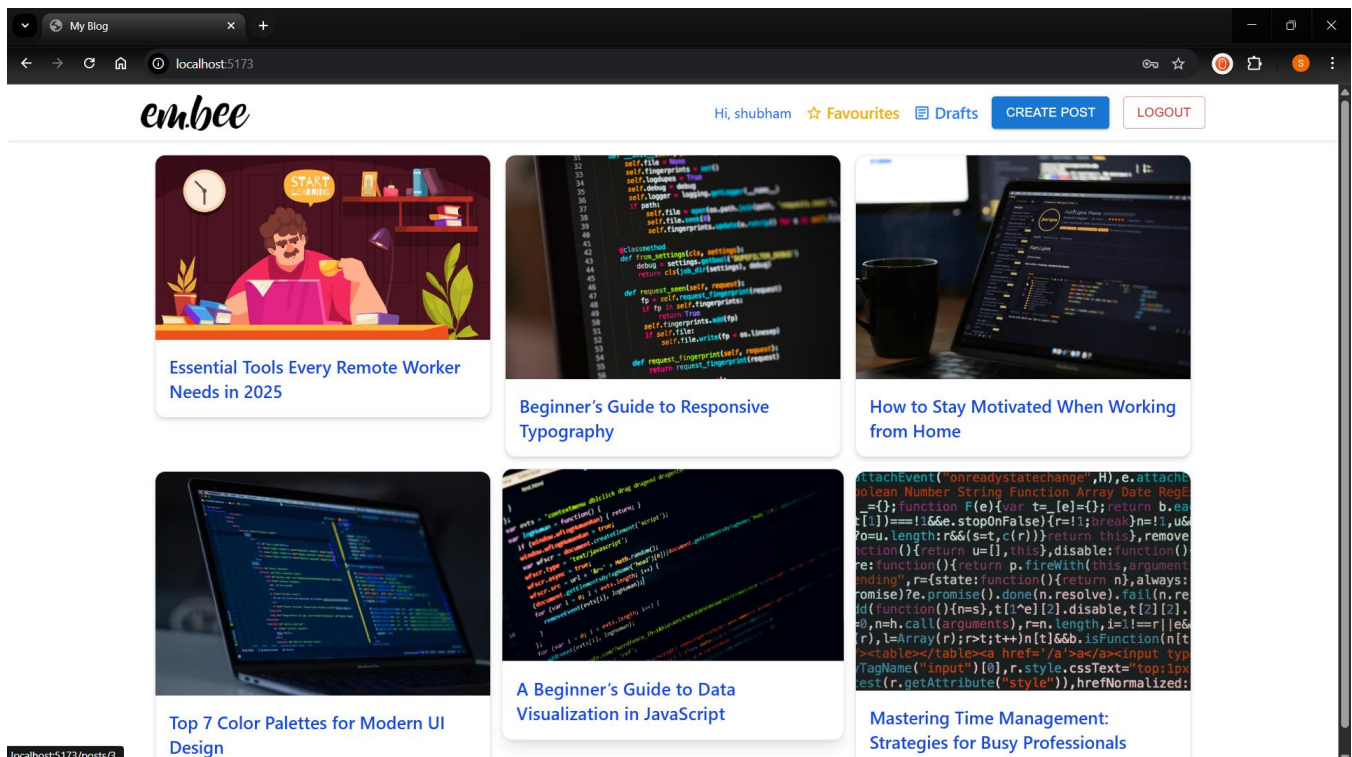
9. Post Details Page
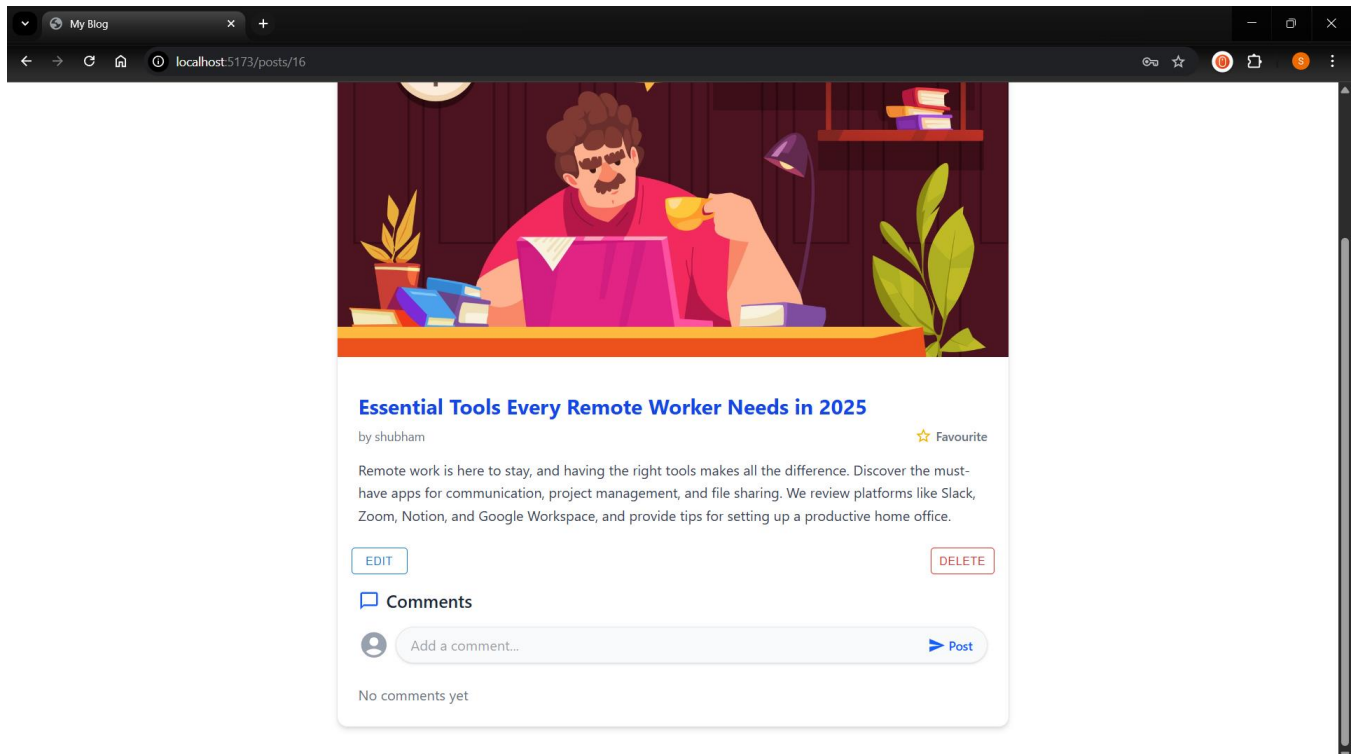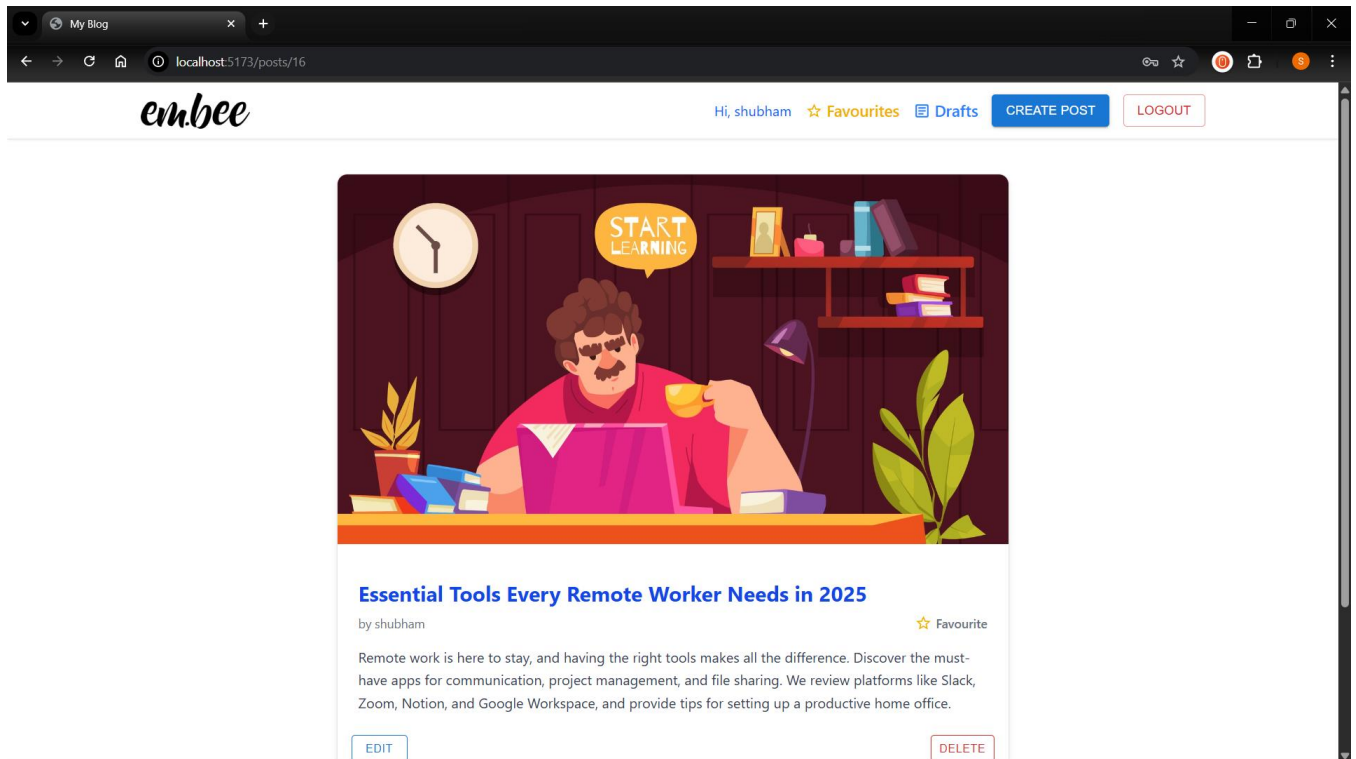
10.Edit Post Page
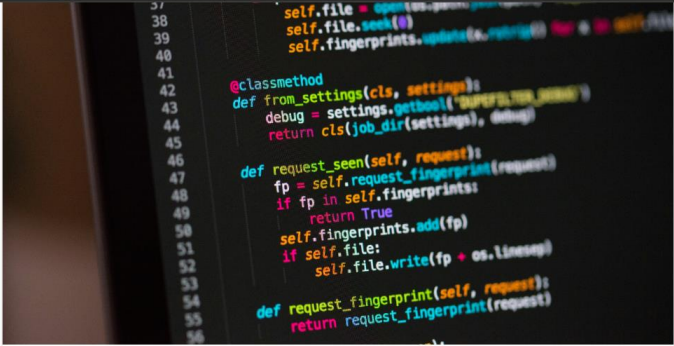
11. Mark/Unmark a Post as Favourite

12. Favourites Page
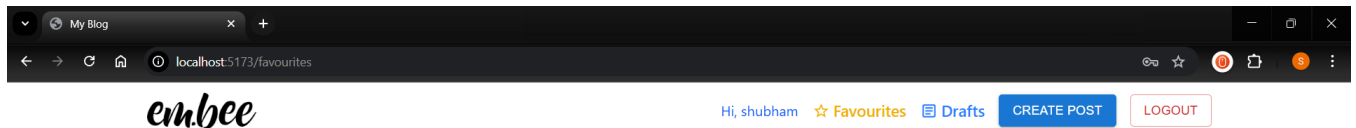
13.New Comment
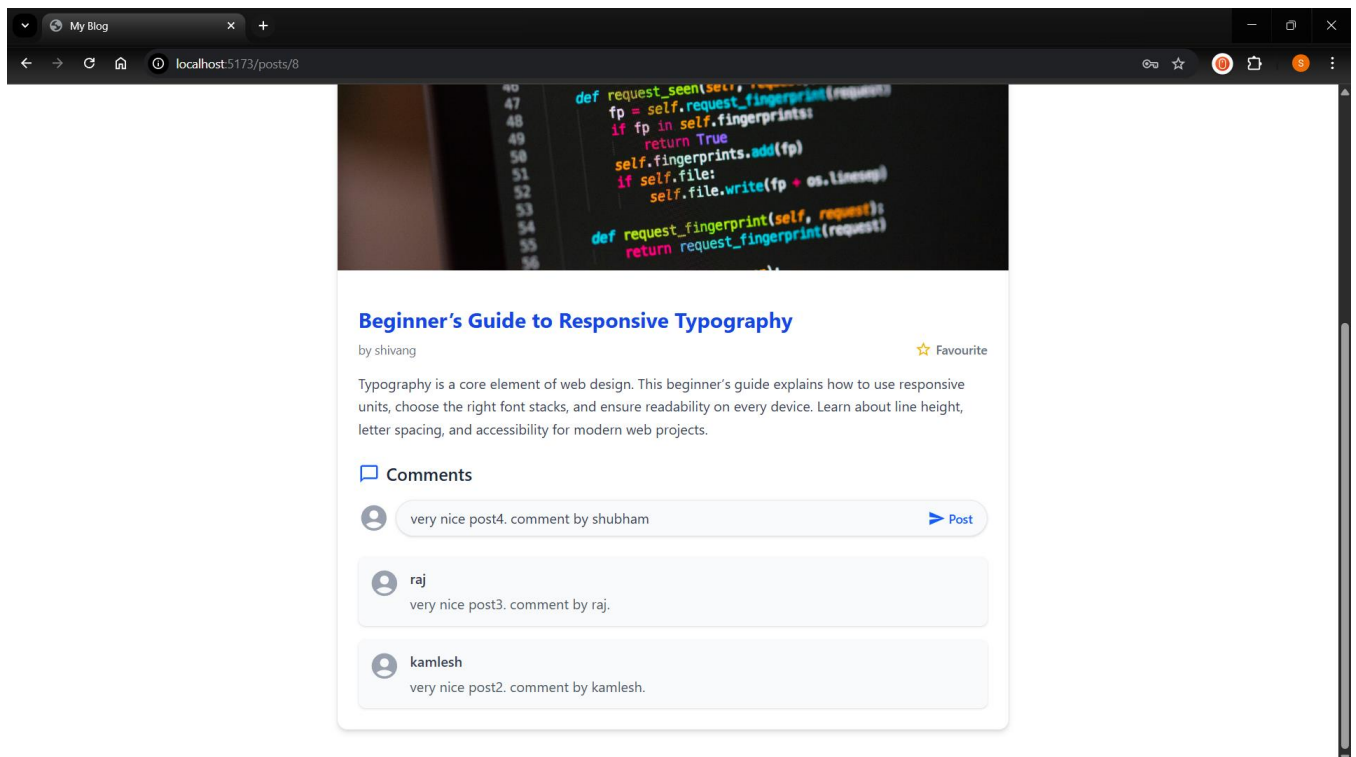
14. All Comments on a Post
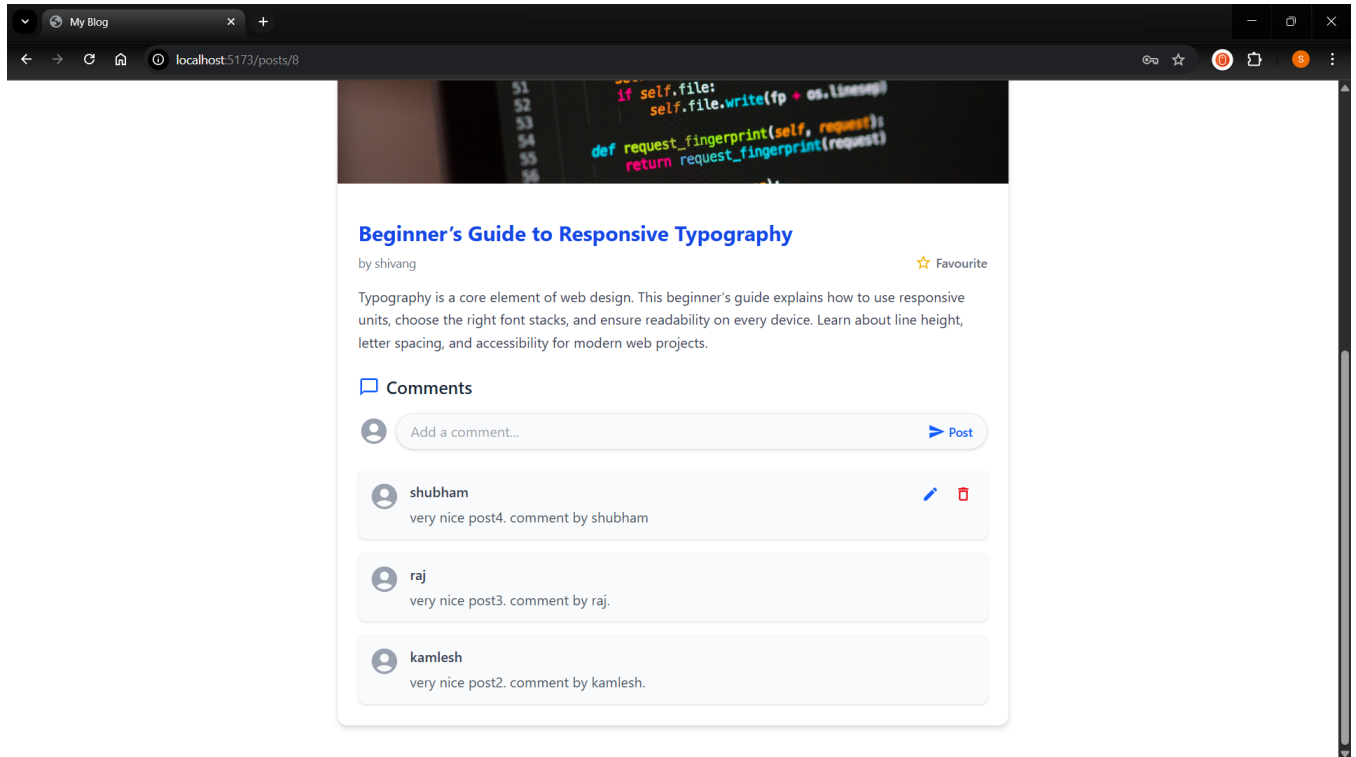
15. Edit Comment
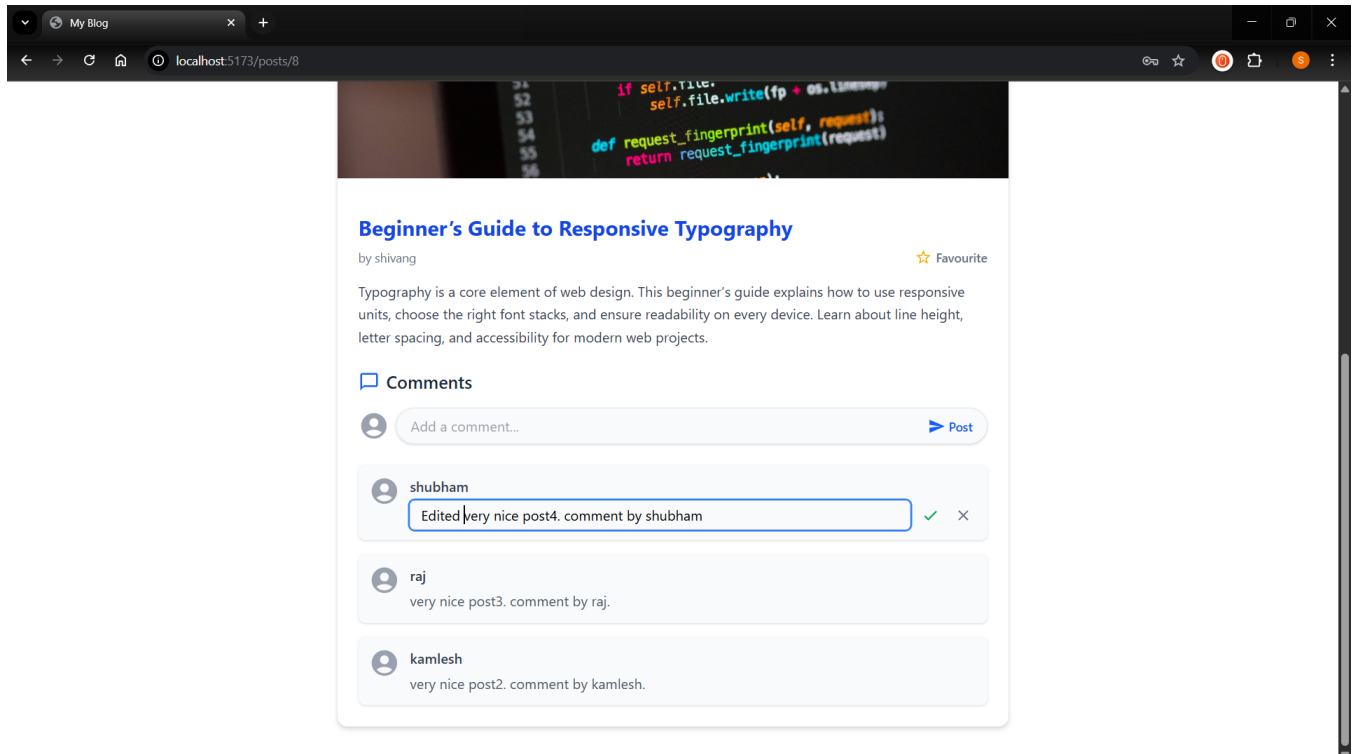
PART-IV
Tools &
Technology

5. **About PHP**

Introduction to PHP

PHP (Hypertext Preprocessor) is a widely-used open-source scripting language designed primarily for web development. It is embedded within HTML and executed on the server, making it a powerful tool for creating dynamic and interactive web applications. Initially created by Rasmus Lerdorf in 1994, PHP has evolved into a robust and flexible language that powers millions of websites worldwide, including major platforms like Facebook, WordPress, and Wikipedia.

Features of PHP

PHP offers numerous features that make it a preferred choice for developers:

Open Source and Free – PHP is freely available for anyone to use and modify. This makes it accessible to beginners and professionals alike.

Cross-Platform Compatibility – It runs on various operating systems, including Windows, Linux, macOS, and Unix, ensuring flexibility in deployment.

Easy to Learn and Use – PHP has a simple syntax similar to C and JavaScript, making it easy to grasp for developers familiar with these languages.

Server-Side Execution – PHP scripts are executed on the server, and only the resulting HTML is sent to the client's browser, enhancing security and efficiency.

Database Connectivity – PHP seamlessly integrates with multiple databases, such as MySQL, PostgreSQL, and MongoDB, allowing dynamic content management.

Support for Various Protocols – PHP supports protocols like HTTP, HTTPS, FTP, and more, making it suitable for web services and APIs.

Extensive Library Support – It provides numerous built-in functions and extensions for handling images, encryption, file handling, and more.

Applications of PHP

PHP is versatile and used in various web applications, including:

Dynamic Websites – It enables interactive features like user authentication, comments, and content updates.

Content Management Systems (CMS) – Platforms like WordPress, Joomla, and Drupal rely on PHP for managing website content.

E-commerce Websites – Online stores such as Magento, WooCommerce, and OpenCart use PHP to handle product catalogs, payments, and orders.

Web Applications – Custom applications like CRM, ERP, and project management tools are often built using PHP.

APIs and Web Services – PHP facilitates API development, allowing applications to communicate seamlessly.

6. <u>About Tailwind CSS Framework</u>

Introduction to Tailwind CSS

Tailwind CSS is a free, open-source utility-first CSS framework that allows developers to rapidly build modern, responsive, and highly customizable user interfaces. Released in 2017, Tailwind CSS takes a unique approach by providing low-level utility classes that can be directly applied to HTML elements, enabling complete design control without writing custom CSS files. Its popularity has grown rapidly due to its flexibility, speed of development, and ability to create pixel-perfect, custom designs efficiently.

Key Features of Tailwind CSS

Tailwind CSS offers several features that make it a powerful and developer-friendly choice for building modern interfaces:

Utility-First Approach – Tailwind provides small, single-purpose classes (like text-center, bg-blue-500, p-4) that can be combined to design any component directly in the markup.

Responsive Design – Built-in responsive modifiers allow easy adaptation of designs for mobile, tablet, and desktop views.

Highly Customizable – Developers can configure and extend Tailwind using a tailwind.config.js file, adjusting colors, spacing, typography, and more to match their project needs.

Consistency in Design – Its utility classes promote a standardized and consistent design system across the entire project.

Performance Optimized – Tailwind uses tree-shaking to remove unused CSS during production builds, resulting in smaller file sizes and faster loading times.

Dark Mode Support – Tailwind offers a simple way to implement dark mode with class-based or media-query-based toggling.

Plugin Ecosystem – A wide range of official and community plugins extend functionality, such as forms, typography, and aspect ratio utilities.

Rapid Prototyping – Because styling happens in the markup, developers can quickly experiment and iterate on designs without switching between HTML and CSS files.

Applications of Tailwind CSS

Tailwind CSS is used in a variety of projects due to its versatility and speed of development: Modern Web Applications – Popular for creating custom dashboards, SaaS products, and full-stack applications.

Landing Pages – Ideal for crafting highly customized, responsive, and fast-loading landing pages.

E-commerce Stores – Perfect for building visually unique online stores without being constrained by pre-designed UI kits.

Design Systems – Helps teams maintain a consistent UI language across large-scale projects.

Rapid Prototyping – Frequently used by startups and product teams to quickly test ideas and iterate on UI designs.

7. About MySQL

Introduction to MySQL

MySQL is an open-source relational database management system (RDBMS) that is widely used for storing, managing, and retrieving structured data. It was initially developed by MySQL AB in 1995 and later acquired by Oracle Corporation. MySQL is known for its speed, reliability, and ease of use, making it a preferred choice for web applications, enterprise software, and cloud-based solutions.

Key Features of MySQL

Open-Source and Free – MySQL is freely available under the GNU General Public License (GPL), although commercial versions are also available.

Relational Database Management – It organizes data into tables with rows and columns, enabling efficient storage and retrieval.

High Performance – MySQL is optimized for handling large amounts of data with minimal latency, making it ideal for high-traffic websites.

Scalability – It supports scaling both vertically (adding resources to a single server) and horizontally (distributing the database across multiple servers).

Data Security – MySQL offers robust security features such as user authentication, encryption, and access control.

Cross-Platform Compatibility – It runs on multiple operating systems, including Windows, Linux, macOS, and Unix.

Integration with Web Technologies – MySQL seamlessly integrates with web development technologies like PHP, Python, Java, and Node.js.

Support for Transactions – It supports ACID (Atomicity, Consistency, Isolation, Durability) transactions, ensuring data integrity.

Replication and Clustering – MySQL provides replication and clustering for load balancing and high availability.

8. About React

Introduction about React

React is a free, open-source JavaScript library developed by Facebook and released in 2013, designed for building fast, interactive, and dynamic user interfaces. It is widely used for creating single-page applications (SPAs) by efficiently updating and rendering components as data changes. React's component-based architecture allows developers to break the UI into reusable, independent pieces, which improves maintainability and scalability.

Key Features of React

React provides several powerful features that make it one of the most popular front-end libraries:

Component-Based Architecture – Applications are built using reusable, self-contained components, promoting modularity and cleaner code.

Virtual DOM – React uses a virtual DOM to efficiently update only the parts of the UI that change, improving performance.

Declarative Syntax – Developers describe how the UI should look for a given state, and React updates it automatically when the state changes.

JSX (JavaScript XML) – A syntax extension that allows developers to write HTML-like code within JavaScript, making components easier to create and read.

Unidirectional Data Flow – Data flows in a single direction, making it easier to debug and predict application behavior.

Rich Ecosystem – A large collection of libraries, tools, and community support enhances development, including routing (React Router) and state management (Redux, Zustand, etc.).

Cross-Platform Development – With React Native, developers can build mobile applications for iOS and Android using the same React principles.

Strong Community & Backing – Maintained by Meta (Facebook) and a vast developer community, React receives continuous updates and support.

Applications of React

React is extensively used across industries to build interactive and scalable user interfaces:

Single-Page Applications (SPAs) – Ideal for creating dynamic SPAs that update content without full page reloads.

Dashboards and Admin Panels – Used to create data-driven dashboards with real-time updates.

E-commerce Websites – Powers fast and smooth shopping experiences with dynamic product displays.

Social Media Platforms – Forms the backbone of highly interactive platforms like Facebook and Instagram.

Cross-Platform Mobile Apps – Used with React Native for building mobile applications with shared codebases.

9. <u>Bibliography</u>

Search Engine : Google

Online Resources:

- ✓ https://react.dev/
- ✓ https://tailwindcss.com/docs
- ✓ https://developer.mozilla.org/
- ✓ https://www.w3schools.com/