MAJOR PROJECT

Blogify: A Blogging Platform

Presented By:

Anshika Saini, B6 (500095656)
Lakshita Maheshwari, B6 (500096122)
Naitik Tyagi, B6 (500096021)
Hardik Singh, B5 (500094922)
Siddharth Rawat, B5 (500094702)

Guided By:

Dr. Keshav Sinha
Assistant Professor
School of Computer Science

Content

- ✓ *Introduction*
- ✓ *Problem Statement*
- ✓ *Motivation*
- ✓ *Tech Stack*
- ✓ *Pert Chart*
- ✓ *Modules*
- ✓ *Methodology*
- ✓ *Programming Concepts*
- ✓ *SWOT Analysis*
- ✓ *Application of the Project*
- ✓ *Objectives*

1. Introduction

The blogging platform is a user-friendly web application that allows individuals and organizations to create, edit, and publish blog posts effortlessly. It is designed to provide secure, scalable, and interactive content sharing, enabling users to engage through comments and likes while offering advanced search and filter capabilities. Built on modern technologies, it aims to empower content creators and foster community interaction.

The purpose of this blogging platform is to provide users with a seamless interface to create, publish, edit, and manage blogs. It will support user registration, content categorization, comment systems, and search functionality. The platform will serve both content creators and readers, with features tailored for engagement, content sharing, and community building.

2. Problem Statement

"Existing blogging platforms often lack customization, content ownership, user engagement, and security features. Many platforms impose restrictions, have limited personalization options, and pose privacy risks due to weak authentication mechanisms. Additionally, inefficient content management and lack of interactive features like comments and likes hinder user experience. This project aims to develop a secure, customizable, and user-friendly blogging platform using the MERN stack, ensuring better content control, enhanced security, and improved engagement for bloggers and content creators."

3. Motivation

- *Empower individuals and organizations to express ideas.*
- *Enable content sharing and audience engagement.*
- *Provide a secure and easy-to-use platform for bloggers.*
- *Encourage knowledge sharing across diverse fields.*
- *Create a digital space for creativity and collaboration.*
- *Support building personal brands and online presence.*
- *Foster a community around common interests and discussions.*

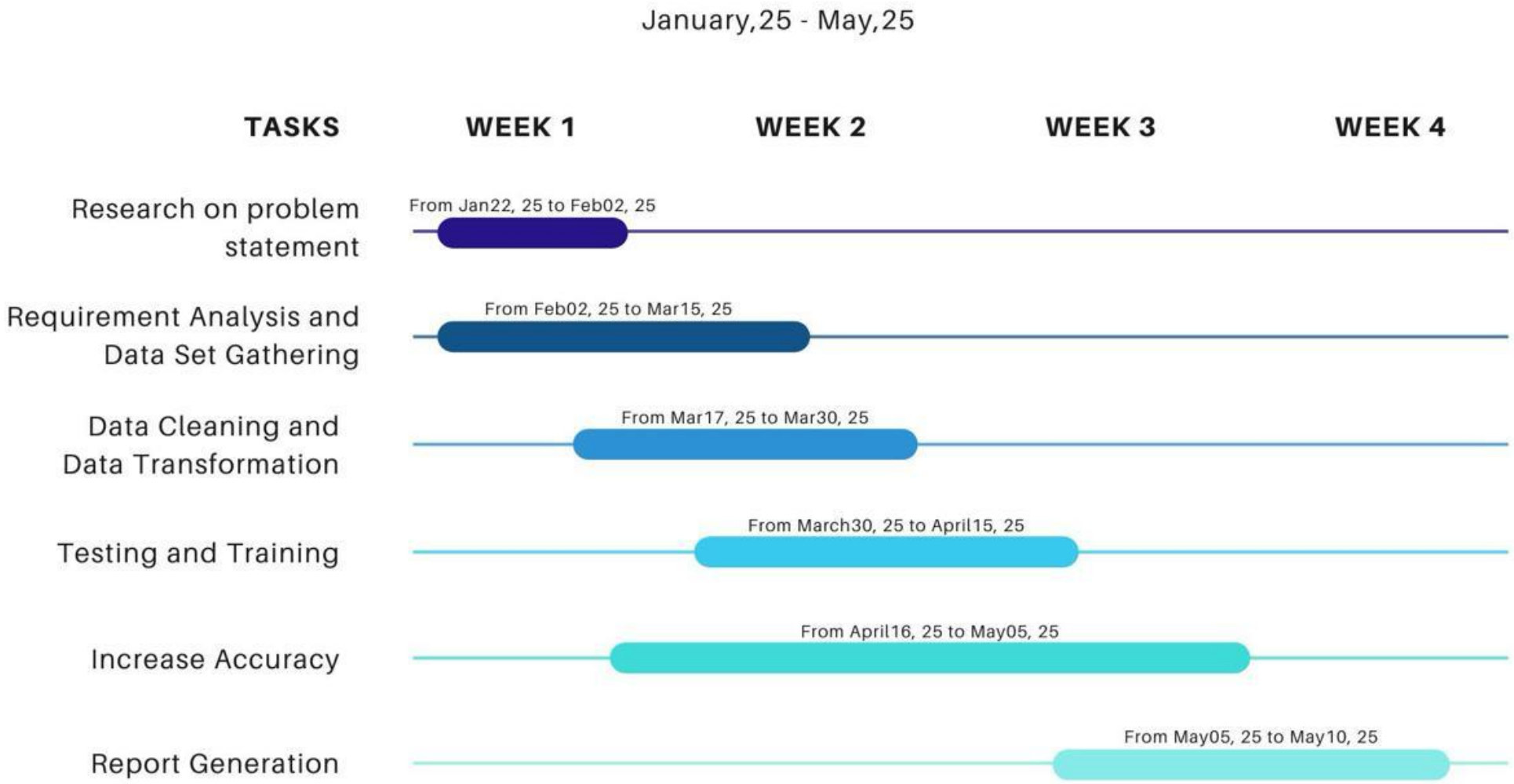
4. Technology Stack

- ***Frontend:***
  Languages: HTML, CSS, JavaScript
  Frameworks: React.js
- ***Backend***
  Frameworks: Node.js, Express.js

- ***Database***
  MongoDB, with all database operations performed through JavaScript-based queries (MQL).

- ***Cloud Deployment***
  Platforms: AWS, Google Cloud, Azure
  Hosting: Heroku
  Containerization: Docker, Kubernetes

5. Pert Chart


January,25 - May,25
TASKS
WEEK 1
WEEK 2
WEEK 3
WEEK 4
Research on problem statement
From Jan22, 25 to Feb02, 25
Requirement Analysis and Data Set Gathering
From Feb02, 25 to Mar15, 25
Data Cleaning and Data Transformation
From Mar17, 25 to Mar30, 25
Testing and Training
From March30, 25 to April15, 25
Increase Accuracy
From April16, 25 to May05, 25
Report Generation
From May05, 25 to May10, 25

6. Modules

- User Authentication
- Blog Management
- Commenting and Likes
- Search and Filtering
- Admin Dashboard

1. ***User Authentication:*** *Secure login and registration system using JWT and bcrypt, allowing users to sign up, log in, and manage their accounts safely.*

2. ***Blog Management (Create, Edit, Delete):*** *Users can easily create new blog posts, edit existing content, or delete blogs. Provides a rich-text editor for better content formatting.*

3. ***Commenting & Likes:*** *Enables readers to leave comments on blog posts, like articles, and engage with the content creator and other readers.*

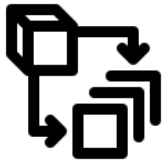
4. ***Search & Filtering:*** *Allows users to quickly search blogs by title, category, or tags, and filter content for a more personalized experience.*

5. ***Admin Dashboard:*** *An admin panel to monitor user activity, manage blogs, handle reported content, and ensure the platform remains clean and well-moderated.*

7. Methodology

Agile Development Approach: *The project is developed using an iterative Agile process, ensuring continuous improvement with regular milestones, feedback loops, and adaptability to changes.*

Frontend and Backend Integration: *The React-based frontend seamlessly communicates with the Node.js/Express backend through REST APIs, ensuring smooth data flow and user interaction.*



Security and Testing Implementation: *Implementation of robust security practices like JWT authentication and bcrypt hashing, along with unit and integration testing to ensure reliability and data protection.*

Deployment and User Feedback: *The platform is deployed on cloud services, followed by gathering user feedback for further refinement and feature improvements.*

8. Programming Concept

1. ***REST API:*** *A set of rules that allows the frontend and backend to communicate over HTTP methods (GET, POST, PUT, DELETE) to handle data operations like blogs, users, and comments.*

2. ***JWT for Authentication:*** *JSON Web Token (JWT) is used to securely transmit user identity information after login, ensuring that only authorized users can access protected routes and features.*

3. ***Encryption using bcrypt:*** *Bcrypt is used to securely hash user passwords before storing them in the database, preventing unauthorized access and protecting sensitive information.*

4. ***Pagination, Sorting, and Filtering:*** *Techniques used to manage and display large amounts of blog data in smaller, manageable sections with options to sort by date or relevance and filter by categories or tags for a better user experience.*

9. SWOT Analysis

Strengths: *Scalable, secure, responsive*

Weaknesses: *Internet dependency*

Opportunities: *Community expansion, premium features*

Threats: *Strong competition, cyber security risks*

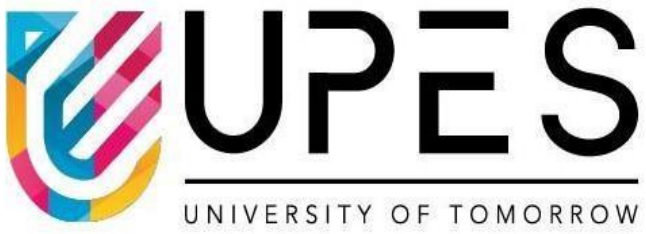
10. Applications

- *Personal blogs*
- *Corporate communication channels*
- *Educational and knowledge-sharing platforms*

10. Objectives

Key goals include:

- *Enable easy blog creation and publishing*
- *Ensure secure user authentication*
- *Allow search, filter, comment, and like functionality*



Thank You!