

CSE311L Project Proposal

Group-4



| Name | ID |
|-------------------------|------------|
| Muhammad Farhan Rafid | 2321534042 |
| Md. Sajjad Sarker Maruf | 2232275642 |
| Shafi Mahadi Nowrose | 2121620643 |
| ABDUL MUNTAKIM | 2031357642 |

Project Proposal

Title: News Portal Management System

1. Introduction

The *News Portal Management System* is a database-driven desktop application designed to streamline digital news publication and management. It provides a structured environment where administrators, journalists, and readers can interact through article publishing, reviewing, commenting, and sharing. The system aims to imitate a real-world newsroom environment, ensuring efficient data handling, user-level access control, and smooth operation across all roles.

2. Objective

The primary objective of this project is to develop a functional, user-friendly Java-based application for managing news articles, journalists, and reader interactions. It focuses on enabling a simple, efficient, and secure way to handle large amounts of news content, ensuring proper workflow between journalists and administrators while maintaining data integrity through a connected MySQL database.

3. Scope of the Project

The system includes multiple levels of access and functionality:

- Admin:**

- Manage news categories.
- Add, update, or remove journalist accounts.
- Approve, publish, or archive articles.
- View all reader interactions (comments, shares, reports).

- Journalists:**

- Register and log in to their accounts.
- Create, edit, and submit articles under assigned categories.
- Track their article performance through views and feedback.

- View and manage the status of their articles (Draft, Published, Archived).

- **Readers:**

- Register and log in to the portal.
- Browse and read published articles.
- Comment on and share articles.
- Bookmark favorite articles for later reading.

4. Functional Description

1. Category Management:

The system maintains a categorized structure for articles (Politics, Technology, Sports, Entertainment, etc.) allowing better organization and navigation.

2. Article Management:

Journalists can create and edit articles, which are reviewed by the admin before being published. Admins can update, approve, or remove any content.

3. User Interaction:

Readers can comment, share, and bookmark articles. Their activities are stored for engagement analytics.

4. Database Connectivity:

The application uses **Java (JDBC)** to connect with **MySQL**. All CRUD (Create, Read, Update, Delete) operations are executed via SQL queries through Java's JDBC interface.

5. Database Design Overview

The system consists of **10 interrelated tables**, each serving a specific function:

| Table Name | Purpose | Sample Data Entries (Text Format) |
|-----------------------|--|--|
| categories | Stores news categories | (1, "Politics"), (2, "Technology") |
| journalists | Holds journalist info | (1, "Rafiq Hasan", "rafig@portal.com") |
| readers | Stores registered readers | (1, "Abdullah Karim", "abdullah@gmail.com") |
| articles | Contains all news articles | (1, "Govt unveils new policy", category=1, status=Published) |
| comments | Tracks reader comments | (1, article_id=1, "Very informative!") |
| shares | Logs shared articles | (1, article_id=1, platform="Facebook") |
| bookmarks | Stores readers' saved articles | (1, reader_id=1, article_id=2) |
| feedback | Stores user feedback on portal or features | (1, reader_id=2, "Great UI design") |
| login_activity | Logs user login/logout timestamps | (1, user_id=1, role='reader', time_in, time_out) |
| reports | Allows users to report inappropriate content | (1, article_id=1, reader_id=3, "False information detected") |

Example Data Insertions (Text Format):

- A *Politics* category is created under **categories**.
- Journalist *Rafiq Hasan* writes an article titled "*Government unveils new policy*" under *Politics*.
- Reader *Abdullah Karim* comments "*Very informative!*" and shares it on *Facebook*.
- Another reader bookmarks the same article for later reading.
- A user submits feedback saying "*Smooth and responsive interface*".

6. Tools and Technologies Used

| Component | Technology / Tool |
|---------------------|------------------------------------|
| Frontend (GUI) | Java Swing / JavaFX |
| Backend Logic | Java (Object-Oriented Programming) |
| Database | MySQL (managed via XAMPP) |
| Connectivity | JDBC (Java Database Connectivity) |
| IDE / Editor | NetBeans / Eclipse |
| Testing Environment | Localhost (XAMPP) |

7. Expected Outcomes

- A fully functional **desktop-based news management system** developed in Java with MySQL integration.
- A **role-based access control** ensuring secure and logical user operations.
- A **relational database** consisting of 10 well-defined tables covering every data aspect of the portal.
- A **complete content management workflow**, including publication, interaction, and moderation.
- A **professional, beginner-friendly project** ideal for academic evaluation and portfolio development.

8. Conclusion

The *News Portal Management System* is a comprehensive Java-based project that integrates **MySQL** and **JDBC** for data connectivity, **Java Swing** for interface design, and **object-oriented principles** for backend management. The system replicates real-world news portal operations, offering an educational yet professional-level experience in full-stack desktop application development. It fulfills all project requirements with proper scalability for future feature enhancements.