Bank Management System

INTRODUCTION

A detailed **Bank Management System** built with **Java**, **MySQL**, **HTML**, **CSS**, **JavaScript**, and **Bootstrap**. This project provides essential banking functionalities such as user management, account transactions, and profile management through interactive web interfaces and robust backend logic.

Features

User Management

- **User Registration**: New users can register securely.
- **Login and Logout**: Authenticate users with session handling.
- **Profile Management**: Update user details and manage profiles.

Account Operations

- **Deposit**: Add funds to the account.
- **Withdrawal**: Safely withdraw funds from the account.
- **Fund Transfer**: Transfer funds between accounts seamlessly.
- **View Account Balance**: Check current account balance.

Transaction Management

- **View Transaction History**: Track all past transactions.
- **Track Account Activities**: Monitor real-time account updates.

Responsive Design

- Designed with **Bootstrap** to ensure compatibility with all screen sizes and devices.

Form Validations

- **JavaScript-based Validations**: Real-time feedback on form inputs ensures user data integrity and smooth user experience.

Technologies Used

- **Frontend**: HTML, CSS, JavaScript, Bootstrap
- **Backend**: Java (Servlets, JDBC)
- **Database**: MySQL
- **Build Tool**: Maven
- **Server**: Apache Tomcat 9
- **IDE**: Eclipse IDE
- **IDE**: Eclipse IDE

Project Structure

BankManagementSystem/

 BankingWebApp/

├── src/

│ ├── main/

│ │ ├── java/

│ │ │ ├── com.bank.dao/

│ │ │ ├── com.bank.model/

│ │ │ ├── com.bank.service/

│ │ │ ├── com.bank.servlet/

│ │ │ └── com.bank.utils/

│ │ ├── resources/

│ │ │ └── database.properties

│ │ └── webapp/

│ │   ├── WEB-INF/

│ │   │ ├── web.xml

│ │   │ └── views/

│ │   │   ├── login.jsp

│ │   │   ├── logout.jsp

│ │   │   ├── profile.jsp

│ │   │   └── registration.jsp

│ │   └── assets/

│ │   ├── css/

│ │   └── js/

│ └── test/

```
|       └── java/
|           └── com.bank.test/
|               ├── dao/
|               ├── service/
|               └── servlet/
├── pom.xml
└── README.md
```

Setup and Installation

SOFTWARE REQUIREMENTS

1. **Java Development Kit (JDK)** 11+
2. **Apache Tomcat** 9+
3. **MySQL** 8.0+
4. **Maven**
5. **Eclipse IDE**

Steps to Run the Project

1. **Clone the Repository**:

git clone https://github.com/Nancy199505/bank-management-system.git

cd bank-management-system

2 . Set up the Database:

- Open **MySQL Workbench** or command line.
- Create a database:

    CREATE DATABASE bank_management;

- Import the tables using the SQL scripts provided in the resources/sql folder.

3 . Configure Database Credentials:

- Update the DatabaseConnection class in com.bank.util with your MySQL username and password.
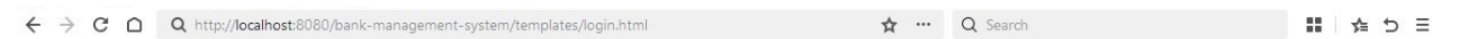
4 . Build the Project:

- Open the project in **Eclipse**.

- ○ Run the following Maven command in the terminal:
  - ○ mvn clean install

5 . Deploy on Tomcat:

  - ○ Right-click on the project in Eclipse → Run on Server → Select **Apache Tomcat**.

IMPLEMENTATION AND RESULTS

Register

Username

Email

Password

Register

Already have an account? Login

Welcome, User!

Your Profile Details:

Email: user@example.com
Account Type: Savings
Balance: $5000

Logout

Conclusion

The Bank Management System is designed to offer a user-friendly, secure, and scalable solution for managing banking operations. Its modular architecture ensures maintainability, while the responsive design guarantees accessibility across devices. This documentation provides an in-depth guide to understanding and deploying the system effectively.