

PROJECT REPORT

Automated Banking Website Using Agile Methodology

1. Introduction

An Automated Banking Website is a web-based application that provides online banking services such as account management, balance inquiry, fund transfer, bill payments, and transaction history. With the advancement of digital technology, banks are shifting from manual operations to automated systems to provide faster, secure, and convenient services to customers.

This project is developed using the **Agile methodology**, which focuses on iterative development, continuous testing, and regular feedback. Agile helps in delivering high-quality software in small increments while ensuring security and reliability, which are critical in banking systems.

2. Problem Statement

Traditional banking systems involve manual processes and physical visits to bank branches, which consume time and effort for both customers and bank staff. Customers often face long queues, limited banking hours, and slow service. There is a need for an automated online banking system that allows customers to perform banking operations anytime and anywhere in a secure manner.

3. Objectives of the Project

The main objectives of the Automated Banking Website are:

- To provide 24/7 online banking services
- To automate basic banking operations
- To ensure secure and reliable financial transactions
- To reduce manual work and operational costs
- To improve customer convenience and satisfaction

4. Scope of the Project

The scope of this project includes:

- User registration and secure login
- Account balance inquiry and transaction history
- Fund transfer between accounts
- Online bill payments
- Email/SMS alerts for transactions
- Admin panel for managing users and accounts

Future enhancements may include mobile banking support, biometric authentication, and AI-based fraud detection.

5. Agile Methodology Used

This project follows the **Agile Scrum methodology**. The development process is divided into short cycles called **sprints**, each lasting 1–2 weeks.

Agile Practices Followed:

- **Product Backlog:** List of banking features and security requirements
- **Sprint Planning:** Selection of features for each sprint
- **Daily Stand-up Meetings:** Tracking progress and resolving issues
- **Sprint Review:** Demonstration of completed features
- **Sprint Retrospective:** Continuous improvement of the process

Agile methodology allows quick adaptation to regulatory changes and customer requirements.

6. Requirement Analysis

6.1 Functional Requirements

- User registration and authentication
- View account details and balance
- Fund transfer and bill payment
- Transaction history
- Admin management system

6.2 Non-Functional Requirements

- High security and data confidentiality
- Fast response time
- High availability and reliability
- User-friendly interface

7. System Architecture

The Automated Banking Website follows a **three-tier architecture**:

1. **Presentation Layer** – Web interface for users
2. **Application Layer** – Business logic and transaction processing
3. **Database Layer** – Secure storage of user and transaction data

This architecture improves scalability, performance, and security.

8. System Features

8.1 User Module

- Secure login with authentication
- Account balance and mini statement

- Fund transfer and bill payment
- Transaction alerts via email/SMS
- Logout and session management

8.2 Admin Module

- Manage user accounts
- Monitor transactions
- Generate reports
- Maintain system security

9. Tools and Technologies Used

- **Frontend:** HTML, CSS, JavaScript
- **Backend:** Java
- **Database:** MySQL / Oracle
- **Agile Tools:** Jira, Trello
- **Version Control:** Git, GitHub

10. Advantages of Agile Methodology

- Faster delivery of secure features
- Easy handling of requirement changes
- Continuous testing and feedback
- Improved collaboration among team members
- High-quality and reliable software

11. Limitations

- Requires continuous stakeholder involvement
- Less detailed documentation compared to traditional models
- Needs skilled and disciplined Agile teams

12. Future Enhancements

- Mobile banking application
- Biometric and OTP-based authentication
- AI-based fraud detection system
- Chatbot for customer support
- Integration with digital wallets

13. Conclusion

The Automated Banking Website developed using Agile methodology provides a secure, reliable, and user-friendly online banking solution. Agile enables continuous improvement, faster development, and high customer satisfaction. This system reduces manual banking operations and enhances the overall banking experience.