Automated Banking Website

Using Agile Methodology

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1. Abstract

An Automated Banking Website is a digital platform that allows customers to perform banking operations such as account management, fund transfers, bill payments, and transaction tracking online. With the growing demand for digital banking services, banks require secure, reliable, and flexible systems to meet customer expectations. This project focuses on developing an Automated Banking Website using the **Agile Software Development Methodology**, which ensures faster delivery, continuous improvement, and high-quality software.

Traditional banking software systems often take a long time to develop and are difficult to modify once deployed. Agile methodology solves this problem by dividing the project into small development cycles called **sprints**. Each sprint delivers a functional module such as user authentication, account management, transaction processing, or customer support. Regular feedback from users and stakeholders helps improve the system continuously.

The Automated Banking Website allows users to register, log in securely, view account details, transfer funds, pay utility bills, and check transaction history. Admin users can manage customer accounts, monitor transactions, and ensure system security. Agile practices such as sprint planning, daily stand-up meetings, sprint reviews, and retrospectives help the development team stay organized and respond quickly to changes.

The system improves customer experience by offering 24/7 access to banking services, reducing the need for physical branch visits. It also increases operational efficiency for banks by automating routine tasks and minimizing manual work.

This project demonstrates how Agile methodology helps in developing secure, scalable, and userfriendly banking systems. It also provides practical experience in teamwork, iterative development, and real-world software project management.

Future enhancements may include AI-based fraud detection, mobile banking apps, and cloud-based infrastructure for better scalability and security.

2. Introduction

2.1 Introduction

An Automated Banking Website enables customers to perform banking operations online. Agile methodology is used to ensure flexible and efficient system development.

2.2 Problem Identification

Traditional banking systems are slow, rigid, and require physical visits for many services.

2.3 Need of the Project

A modern banking platform is needed to provide fast, secure, and convenient digital services.

2.4 Project Scheduling

Phase	Duration
Planning	2 Days
Development	8 Days
Testing	3 Days
Review	2 Days
Documentation	1 Day

2.5 Objectives

- Provide online banking services
- Improve customer convenience
- Use Agile methodology
- Ensure secure transactions
- Enable real-time updates
- Enhance user satisfaction

3. Software Requirement Specification (SRS)

3.1 Purpose

To develop a secure and flexible Automated Banking Website using Agile methodology.

3.2 Scope

Useful for banks, financial institutions, and customers.

3.3 Hardware / Software Requirement

Hardware:

- 4GB RAM

- Intel i3 or above
- 500GB HDD

Software:

- Windows 10
- Java / Web Technologies
- MySQL
- VS Code / Eclipse

3.4 Tools

- HTML, CSS, JavaScript
- Java / Python
- MySQL
- Git
- Agile Tools (Jira / Trello)

3.5 Software Process Model Agile

Model

- Sprint Planning
- Daily Stand-up
- Sprint Review
- Sprint Retrospective

4. System Design

4.1 Data Dictionary

Field	Type	Description
AccountNo	int	Bank account number
Name	String	Customer name
Balance	double	Account balance
TransactionID	int	Transaction ID
Status	String	Success / Failed

4.2 ER Diagram

Customer → Account → Transaction

4.3 DFD

User → Banking System → Database → Confirmation

4.4 Diagrams

- Use Case Diagram
- Activity Diagram
- Flowchart

5. Implementation

5.1 Program Code

Modules developed in sprints:

- User Login & Authentication
- Account Management
- Fund Transfer
- Bill Payments
- Admin Dashboard

5.2 Output Screens

- Login Page
- Account Summary
- Transfer Funds
- Transaction History
- Admin Panel

6. Testing

6.1 Test Data

Input	Expected Output
Wrong PIN	Access Denied
Insufficient Balance	Transaction Failed
Empty Fields	Validation Error

6.2 Test Result

All features worked correctly after sprint-based testing.

7. User Manual

7.1 How to Use

1. Login to the system
2. View account details
3. Transfer funds
4. Pay bills
5. Check transaction history

7.2 Screen Layout

Web-based interface with secure and simple navigation.

8. Project Applications & Limitations

Applications

- Online Banking
- Digital Payments
- Financial Management
- Customer Support

Limitations

- Internet dependency
- Limited offline support
- Requires strong security measures

9. Conclusion & Future Enhancement

The Automated Banking Website developed using Agile methodology provides a secure and efficient solution for digital banking services. Agile ensures faster delivery, better quality, and continuous improvement.

Future Enhancements:

- AI fraud detection
- Mobile banking app
- Cloud deployment
- Biometric authentication

10. Bibliography & References

- Agile Manifesto
- Scrum Guide
- Banking Websites
- GeeksForGeeks
- IEEE Journals