

Project Report

Customer Relationship Management (CRM) System Using Agile Methodology

1. Introduction

Customer Relationship Management (CRM) is a technology-driven system designed to manage an organization's interactions with current and potential customers. The main goal of a CRM system is to improve customer satisfaction, increase customer retention, and enhance overall business performance.

In today's competitive market, businesses must understand customer needs, track interactions, and provide personalized services. A CRM system helps organizations store customer data, manage sales pipelines, track customer support tickets, and analyze customer behavior.

This project focuses on developing a Customer Relationship Management (CRM) system using the Agile methodology. Agile ensures continuous improvement, flexibility, faster delivery, and close collaboration with stakeholders throughout the development lifecycle.

2. Objectives of the CRM Project

The main objectives of the CRM system are:

- To centralize customer information in a single platform
- To improve communication between the organization and customers
- To automate sales, marketing, and customer support processes
- To enhance customer satisfaction and loyalty
- To provide real-time reports and analytics for better decision-making
- To deliver a flexible and scalable system using Agile practices

3. Scope of the Project

The scope of the CRM project includes:

- Customer data management (personal details, communication history)
- Lead and opportunity management
- Sales tracking and forecasting
- Customer support and ticket management
- User roles and access control
- Reports and dashboards
- Integration with email and notification systems

Out of scope:

- Advanced AI-based customer prediction
- Third-party payment gateway integration

4. Agile Methodology Overview

Agile is an iterative and incremental software development methodology that emphasizes collaboration, customer feedback, and rapid delivery. Instead of developing the entire system at once, Agile breaks the project into small iterations called sprints.

Key Agile Principles Used:

- Customer collaboration over contract negotiation
- Responding to change over following a fixed plan
- Working software over comprehensive documentation
- Continuous delivery of valuable software

5. Agile Framework Used – Scrum

The Scrum framework is used for CRM development.

Scrum Roles:

- **Product Owner:** Defines requirements and prioritizes the product backlog
- **Scrum Master:** Ensures Agile practices are followed and removes obstacles
- **Development Team:** Designs, develops, tests, and delivers the CRM system

Scrum Artifacts:

- Product Backlog
- Sprint Backlog
- Increment

Scrum Events:

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

6. System Requirements

6.1 Functional Requirements

- User login and authentication
- Add, update, and delete customer records
- Track customer interactions (calls, emails, meetings)
- Manage leads and sales opportunities
- Generate reports and dashboards

- Handle customer support tickets

6.2 Non-Functional Requirements

- High system performance
- Data security and privacy
- Scalability
- User-friendly interface
- High availability and reliability

7. Tools and Technologies Used

- Frontend: HTML, CSS, JavaScript, React
- Backend: Java / Spring Boot
- Database: MySQL
- Version Control: Git
- Agile Tools: Jira / Trello
- Testing: Manual Testing, Selenium (optional)

8. Sprint Planning and Execution

Sprint 1: Requirement Analysis and UI Design

- Gather requirements from stakeholders
- Create user stories
- Design wireframes and UI mockups

Sprint 2: Customer Management Module

- Implement customer registration and profile management
- CRUD operations for customer data

Sprint 3: Sales and Lead Management

- Lead creation and tracking
- Sales pipeline visualization

Sprint 4: Support and Reporting Module

- Ticket management system
- Reports and analytics dashboard

Sprint 5: Testing and Deployment

- System testing
- Bug fixing

- Final deployment

9. Testing Strategy

- Unit Testing
- Integration Testing
- System Testing
- User Acceptance Testing (UAT)

Agile testing is performed continuously during each sprint to ensure quality at every stage.

10. Advantages of Using Agile for CRM Development

- Faster delivery of features
- Better adaptability to changing requirements
- Improved customer satisfaction
- Continuous feedback and improvement
- Reduced project risks

11. Limitations

- Requires active stakeholder involvement
- Documentation may be less detailed
- Team dependency and coordination challenges

12. Future Enhancements

- AI-based customer behavior analysis
- Mobile CRM application
- Chatbot integration
- Advanced data analytics

13. Conclusion

The Customer Relationship Management (CRM) system developed using Agile methodology provides a flexible, efficient, and customer-centric solution. Agile enables continuous improvement, early detection of issues, and better alignment with business needs. The CRM system helps organizations build stronger customer relationships, improve operational efficiency, and gain a competitive advantage.

14. References

- Agile Manifesto
- Scrum Guide
- Software Engineering Textbooks

