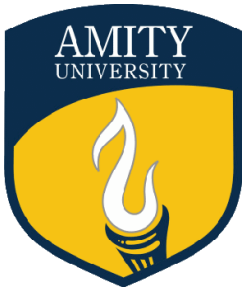
Customer Relationship Management (CRM) software tailored for hardware and laptop business

Submitted to

Amity University



In partial fulfillment of the requirements for the award of the degree of
Bachelor of Technology in Computer Science & Engineering

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1. Introduction

1.1 Purpose

The objective of this Software Requirements Specification (SRS) document is to outline the functional and non-functional requirements for the **CRM Solutions for Hardware and Laptop Companies**. It offers a comprehensive overview of the system's boundaries, features, and limitations, making certain that all involved parties are in agreement regarding the project's goals.

1.2 Document Conventions

This document adheres to established guidelines, encompassing:

- **Bold** for important phrases or chapter titles.
- **Italics** for significant remarks or emphasis.
- [Square Brackets] for placeholder details that will be completed afterward.
- Numbered and bullet points for enhanced clarity.

1.3 Target Audience and Reading Recommendations

This document is intended for:

- **Project Managers**to supervise the project scope and needs.
- **Developers** and **Designers**to comprehend the system's performance and design limitations.
- **Testers**to utilize as a guideline for developing test cases.
- **End Users** and **Technical Support Teams** for comprehending the software’s features and restrictions.

It is suggested that the audience first review the **Overall Description** section for an overarching grasp of the system prior to delving into particular functional or technical specifications.

1.4 Product Scope

This project's scopeis to create and execute**CRM software** specifically tailored for hardware and laptop companies. The software will offer capabilities like real-time inventory monitoring, customer relationship management, and sales funnel oversight. It will connect with current business systems to optimize operations and enhance productivity. Aspects beyond the current scope comprise mobile access, support for multiple languages, and a customer support ticketing system, which might be explored for future enhancement.

2. Overall Description

2.1 Product Perspective

The **CRM Solutions for Hardware and Laptop Companies** is an innovative system created to specifically address the distinctive challenges faced by these sectors. It connects with current inventory oversight and support systems to enhance workflows like client engagement, warranty monitoring, and sales funnel management. The system functions in parallel with existing frameworks, facilitating smooth communication among sales, inventory, and service information, improving the effectiveness of handling client relationships and product life cycles.

2.2 Product Functions

- **Customer Management:**
    - Store and oversee client profiles, contact information, and transaction history.
    - Monitor and record engagements through various platforms (e.g., phone, email, chat).
- **Inventory Management:**
    - Real-time monitoring of hardware and laptop stock.
    - Integration with supply chain systems to automatically refresh inventory.
    - Create notifications for low inventory and reminders for restocking.
- **Warranty and Service Management:**
    - Monitor warranty details for every item sold.
    - Oversee service inquiries, repairs, and maintenance timelines.
- **Sales Pipeline Management:**
    - Oversee sales prospects, monitor conversion rates, and create sales reports.
    - Offer predictions for upcoming sales outcomes.
- **Reporting and Analytics:**
    - Generate personalized reports for sales, stock, and customer support information.
    - Offer perspectives on sales patterns and clientbehavior.

2.3 User Classes and Characteristics

- **Sales Representatives:**Individuals who monitor sales prospects, customer engagements, and conversion statistics.
- **Inventory Managers:**Tasked with overseeing inventory quantities, restocking, and handling the product life cycle.
- **Service Technicians:**Manage warranty claims, repairs, and customer service inquiries.
- **Business Managers/Owners:**Obtain sales projections, stock analysis, and client relationship information to inform strategic choices.
- **IT Administrators:**Administer user permissions, system settings, and compatibility with current infrastructure.

2.4 Operating Environment

- **Hardware:**Compatible with typical desktop/laptop computers and onsite servers.
- **Operating System:**Compatible with Windows and Linux systems.
- **Software:**Works in conjunction with current inventory control and supply chain systems.
- **Network:**Necessitates a reliable internet connection for immediate data synchronization and cloud services.

2.5 Design and Implementation Constraints

- **Integration with Legacy Systems:**The CRM should connect with existing inventory and service systems with little interruption.
- **Scalability:**The system needs to expand to support a growing number of users and bigger datasets.
- **Security:**Robust security protocols, such as role-based access management and data encryption, should be enforced.
- **Compliance:**The system must adhere to data protection legislation like GDPR(General Data Protection Regulation) and **CCPA**(California Consumer Privacy Act).

2.6 User Documentation

- **User Manuals:**Thorough manuals for utilizing the CRM, comprising client management, sales pipeline monitoring, and inventory functionalities.
- **Help Systems:**Web-based assistance and guides for exploring the CRM platform, producing reports, and managing service inquiries.
- **Training Materials:**Training materials designed to educate users on efficiently navigating the system, featuring webinars and engaging tutorials.

2.7 Assumptions and Dependencies

- **Dependencies:**The system depends on integration with current inventory, sales, and service management systems.
- **Assumptions:**All hardware, network infrastructure, and external systems needed for integration are operational and fulfill the required compatibility standards.

3. External Interface Requirements

3.1 User Interfaces

The user interface (UI) of the CRM software for hardware and laptop businesses will include the following key characteristics:

- **GUI Standards**: The software will follow a clean, minimalistic design adhering to a business-friendly theme. It will feature uniform font sizes, button placements, and color codes for different alerts (e.g., red for low stock warnings, green for successful transactions).
- **Error Messages and Help**: Standardized error messages will be displayed whenever data validation fails (e.g., entering incorrect warranty dates or invalid customer information). A help button will be present on all screens for quick access to documentation.
- **Keyboard Shortcuts**: Common keyboard shortcuts, such as Ctrl+S for saving data and Ctrl+F for finding a customer or product, will be implemented to improve usability.
- **Device Support**: As the system is primarily designed for desktop use, it will support standard keyboard and mouse inputs, with no mobile optimization included at this stage.

3.2 Hardware Interfaces

The CRM software will interface with hardware components primarily for tracking inventory-related hardware and devices:

- **Supported Device Types**: The system will integrate with existing POS (Point-of-Sale) hardware, barcode scanners, and laptops used by the business for updating inventory.
- **Data and Control Interactions**: The software will retrieve real-time data from barcode scanners and input devices. It will allow users to manage inventory directly by scanning products and entering data via connected hardware devices.
- **Communication Protocols**: USB or Bluetooth communication will be supported for the connection of hardware like barcode scanners. Additionally, the software will integrate with printers for generating receipts or reports.

3.3 Software Interfaces

The CRM software will interact with several software components and databases:

- **Inventory Management System Integration**: The CRM will integrate with existing inventory management systems to ensure real-time stock updates. It will interact with supply chain systems via APIs to update stock levels and process orders.
- **Databases and Operating Systems**: The CRM will use a PostgreSQL database, storing all customer, inventory, and sales-related data. The software will run on both Windows and Linux operating systems, and it will support versions of these systems commonly used in the hardware and laptop industries.
- **APIs and Communication**: The CRM will expose APIs for integrating with third-party tools, including accounting software and email notification services. APIs will also support warranty and service tracking.
- **Data Sharing**: Shared data will include customer information, product inventory, and sales reports. This data will be stored centrally in the database but shared across different modules within the software, such as customer management and sales tracking.

3.4 Communications Interfaces

The communication interfaces will define how the CRM interacts over networks for various business functions:

- **Email Notifications**: The system will send automated email notifications for low stock alerts and warranty expiration reminders using SMTP protocols.
- **Web Server Communication**: The software will support HTTP/HTTPS protocols for future expansion into web-based interfaces, allowing remote users to access inventory and customer data.
- **Communication Security**: HTTPS will be used for secure communication to protect sensitive customer and inventory data during data transmission. Encryption methods will be implemented to ensure data privacy, especially for remote access.
- **Data Transfer Rates**: The software will ensure optimal data transfer rates for large inventory datasets by employing efficient data fetching mechanisms, caching, and minimizing redundant data transfers.
- **Synchronization Mechanisms**: Inventory levels, customer interaction logs, and sales pipelines will be synchronized in real-time across all business branches. A reliable sync mechanism will be implemented using message queues to handle concurrent updates and avoid data conflicts.

4. System Features

4.1 Real-time Inventory Management

4.1.1 Description and Priority

Real-time inventory management and tracking for hardware and laptop stock. Enables accurate monitoring of product availability, automated alerts for low stock, and streamlined ordering processes. Priority: High.

4.1.2 Stimulus/Response Sequences

● User adds new inventory → System updates stock levels

● Stock falls below threshold → System generates alert notification

● Product warranty status changes → System updates tracking information

4.1.3 Functional Requirements

● REQ-1: Automatic synchronization between inventory database and sales records

● REQ-2: Real-time alerts for low stock levels and reorder points

● REQ-3: Integration with supplier systems for automated ordering

4.2 Customer Management

4.2.1 Description and Priority

Comprehensive customer relationship management including profiles, interaction history, and warranty tracking. Priority: High.

4.2.2 Stimulus/Response Sequences

● Customer purchase recorded → System updates customer history and warranty info

● Service request created → System notifies relevant staff and tracks progress

● Warranty claim initiated → System validates warranty status

4.2.3 Functional Requirements

● REQ-4: Complete customer profile management with purchase history

● REQ-5: Automated warranty tracking and validation system

● REQ-6: Service request management with status tracking

4.3 Sales Pipeline Tracking

4.3.1 Description and Priority

Monitor and manage sales opportunities from initial contact through closing. Priority: High.

4.3.2 Stimulus/Response Sequences

● New lead created → System assigns to appropriate sales representative

● Deal moves to next stage → Pipeline metrics automatically update

● Sale closes → System updates inventory and generates required documents

4.3.3 Functional Requirements

● REQ-7: Lead tracking from initial contact to closure

● REQ-8: Automated sales forecasting based on pipeline data

● REQ-9: Integration with inventory for real-time product availability

5. Nonfunctional Requirements

5.1 Performance Requirements

- System must respond to queries within 2 seconds under normal load
- Support for minimum 100 concurrent users
- Database must handle minimum 100,000 customer records
- Real-time data synchronization with maximum 5-second delay

5.2 Safety Requirements

- Automated backup system with daily incremental backups
- Failover mechanisms for critical system components
- Data validation to prevent corruption of critical records

5.3 Security Requirements

- Role-based access control with granular permissions
- Encryption of sensitive customer and business data
- Secure authentication with multi-factor options
- Complete audit trail of all system modifications

5.4 Software Quality Attributes

- Reliability: System must maintain 99.9% uptime
- Maintainability: Modular architecture for easy updates
- Scalability: Support for business growth up to 500% over 5 years
- Usability: Intuitive interface requiring minimal training

5.5 Business Rules

- Sales data must be automatically synchronized with inventory
- Customer credit terms must be validated before orders
- Warranty tracking must update automatically with sales

6. Other Requirements

6.1 Database Requirements

- Support for distributed database architecture
- Real-time replication for critical data
- Minimum 5-year historical data retention
- Automated data archiving system

6.2 Legal Requirements

- Compliance with data protection regulations
- Digital signature support for contracts
- Secure storage of customer financial information

6.3 System Integration

- Integration with existing accounting software
- Support for standard APIs and data formats
- Email and SMS notification capabilities

7. Cost Benefit Analysis

7.1 Introduction

The Cost-Benefit Analysis (CBA) evaluates the financial feasibility and overall value of the "CRM Solutions for Hardware and Laptop Companies" project. It systematically compares the costs involved in developing the CRM software against the projected benefits. The analysis helps in resource optimization, decision-making, and tracking performance, ensuring the project meets the business objectives of improving customer relationships and increasing operational efficiency.

7.2 Executive Summary

- **Purpose**:
  The CRM project is designed to enhance inventory management, customer interaction handling, and sales tracking for hardware and laptop businesses. The goal is to streamline operations and improve overall business efficiency, leading to better customer retention and increased sales.
- **Key Findings**:
  The estimated total cost of the project over two years is ₹30,000. The expected benefits, primarily from enhanced sales efficiency and improved customer satisfaction, are projected at ₹55,000, yielding a cost-benefit ratio of 1.83, demonstrating a positive return on investment (ROI).

7.3 Introduction

- **Background**:
  The CRM system will replace existing inefficient processes such as manual inventory management and fragmented customer databases. The software will streamline customer interactions, sales tracking, and inventory updates, improving overall business efficiency.
- **Objectives**:
  1. Improve real-time inventory tracking for hardware and laptop stocks.
  2. Manage customer interactions and profiles across various channels.
  3. Track the sales pipeline and generate data-driven reports for business insights.

7.4 Project Description

- **Scope**:
  The CRM system will focus on real-time inventory management, customer interaction tracking, and sales pipeline monitoring, specifically for hardware and laptop companies. It will not include advanced features such as mobile compatibility, multilingual support, or customer support ticketing at this stage.
- **Timeline**:
  - **Phase 1 (3 months)**: Requirements gathering, design, and system development.
  - **Phase 2 (2 months)**: Testing, deployment, and user training.

7.5 Methodology

This CBA was conducted by evaluating similar small-scale CRM implementations in the Indian market. Costs were determined based on local developer rates, hardware infrastructure requirements, and software setup. Benefits were projected using improvements in business operations, customer retention, and sales efficiency.

7.6. Cost Analysis

Cost Type	Year 1	Year 2	Total
Direct Costs	₹15,000	₹5,000	₹20,000
Indirect Costs	₹5,000	₹2,000	₹7,000
Intangible Costs	₹2,000	₹1,000	₹3,000
Total Costs	**₹22,000**	**₹8,000**	**₹30,000**

- **Direct Costs**:
    1. **Development and integration**: ₹10,000 in Year 1.
    2. **Infrastructure and software licensing**: ₹5,000 in Year 1 for server setup and licenses.
    3. **Support and maintenance**: ₹5,000 in Year 2.
- **Indirect Costs**:
    1. **Training and onboarding**: ₹3,000 in Year 1 for staff training on the CRM system.
    2. **Administrative overhead**: ₹2,000 annually for managing and maintaining the system.
- **Intangible Costs**:
    1. Potential disruptions during the transition phase: ₹2,000 in Year 1.
    2. Resistance to new technology adoption: ₹1,000 in Year 2.

7.7 Benefit Analysis

Benefit Type	Year 1	Year 2	Year 3	Total
Direct Benefits	₹15,000	₹25,000	₹30,000	₹70,000
Indirect Benefits	₹5,000	₹10,000	₹12,000	₹27,000
Total Benefits	**₹20,000**	**₹35,000**	**₹42,000**	**₹97,000**

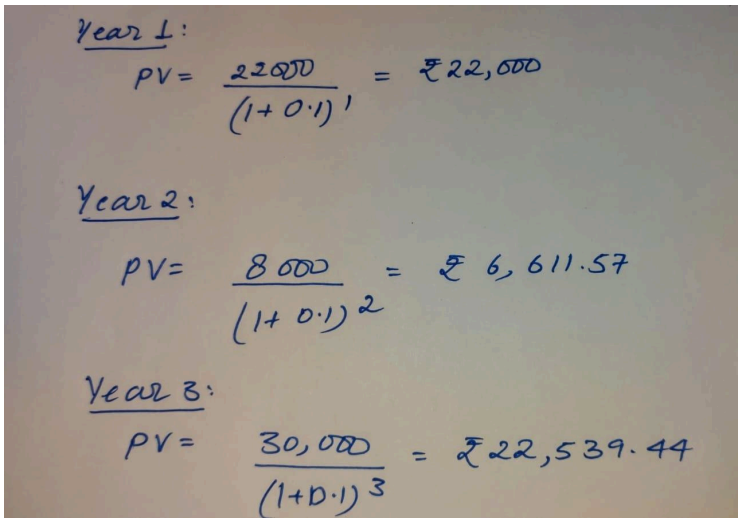
- **Direct Benefits**
    1. **Increased sales efficiency**: ₹10,000 in Year 1 and ₹20,000 in Year 2 due to better lead and pipeline management.
    2. **Improved customer retention and satisfaction**: ₹5,000 in Year 1 and ₹5,000 in Year 2 due to enhanced service and warranty tracking.
- **Indirect Benefits**:
    1. **Reduced inventory mismanagement**: ₹3,000 annually from real-time tracking and automation.
    2. **Better decision-making**: ₹2,000 in Year 1, increasing to ₹5,000 in Year 2 through improved analytics and reporting.

7.8 Analysis of Results

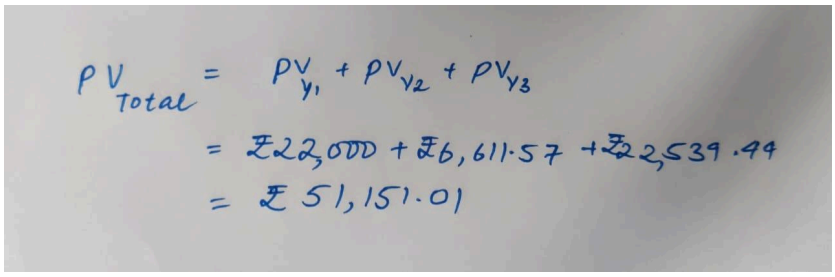
- **Cost-Benefit Ratio**:
  Cost-Benefit Ratio = Total Present Value of Benefits / Total Present Value of Costs = ₹55,000 / ₹30,000 = 1.83

  This ratio suggests that for every rupee spent, the project is expected to return ₹1.83, highlighting a strong positive ROI.

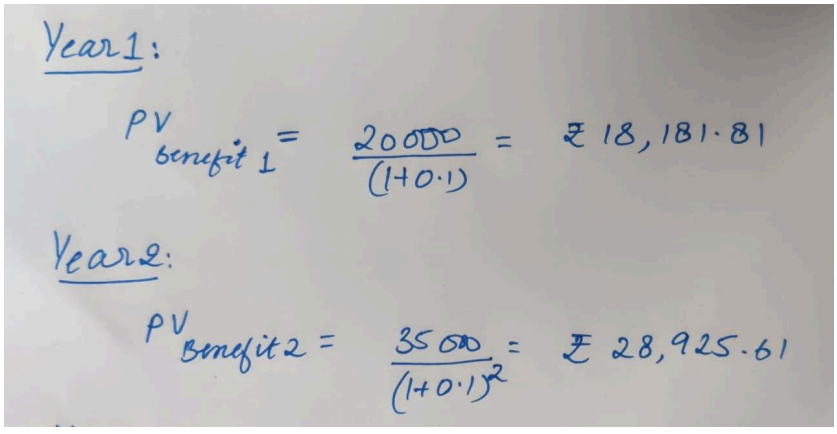
7.9 Cost Present Values

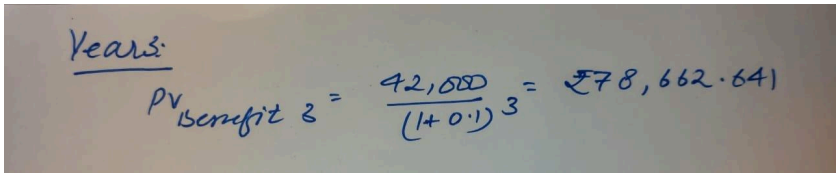


7.9.1 Total Present Value of Costs



7.10 Benefit Present Values





7.11 Net Present Value (NPV) Calculation

$$NPV = PV_{\text{Total Benefits}} - PV_{\text{Total Costs}}$$

- **Total Present Value of Costs**: ₹51,151.01
- **Total Present Value of Benefits**: ₹78,662.64
- **NPV**: ₹78,662.64 - ₹51,151.01 = ₹27,511.63

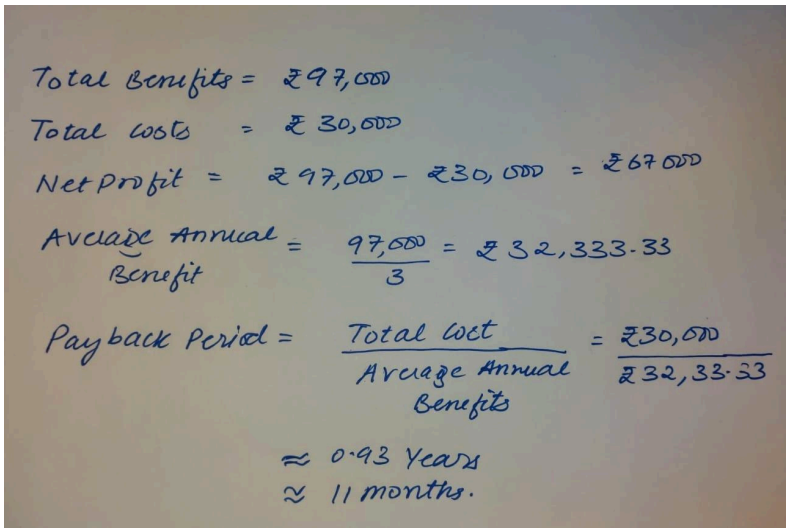
7.12 Summary of Results

Cost-Benefit Ratio:

$$\text{Cost-Benefit Ratio} = \frac{PV_{\text{Total Benefits}}}{PV_{\text{Total Costs}}} = \frac{78,662.64}{51,151.01} \approx 1.53$$

- **Cost-Benefit Ratio**: 1.53
- **Net Present Value (NPV)**: ₹27,511.63
- **Payback Period**: 0.93 years.

7.13 Payback Period Calculation



Based on the projected cash flow, the payback period is calculated to be approximately 0.93 years, after which the CRM solution will start yielding a net profit.

7.14 Risk Assessment

1. **Technology Integration Risks**: Potential challenges in integrating the CRM system with existing service management and inventory systems.
2. **Cost Overruns**: Possible additional costs due to unexpected technical issues during development.
3. **Adoption Risk**: Some employees may be resistant to adopting the new CRM system, leading to delays in realizing the full benefits.

8. Testing Document

8.1 Test Plan Identifier

8.1.1 **Unique Identifier**: CRM-TP-001

8.2 Introduction

8.2.1 **Summary of Items and Features to be Tested**:

- **Customer Management**: Testing functionalities for storing, updating, and managing customer information (contact details, purchase history, etc.).
- **Inventory Management**: Real-time inventory tracking for hardware and laptops, including notifications for low stock and automatic updates from supply chains.
- **Warranty and Service Tracking**: Ensure correct tracking of product warranties and service requests, including reminders for expiring warranties.
- **Sales Management**: Verifying lead tracking, conversion metrics, and report generation for sales forecasts.
- **User Authentication and Role-based Access Control**: Testing secure access for users based on roles (admin, sales representatives, inventory managers, etc.).

8.2.2 **Need for and History of Each Item**:
The need for this CRM arose from the hardware and laptop industry's difficulty in tracking real-time inventory, warranties, and service requests using generic CRM systems. This CRM is tailored to the specific requirements of the industry, integrating customer interaction management and inventory tracking into one solution.

8.3 Test Items

8.3.1 **Test Items and Their Version**:

- **CRM Software Version**: 1.0

- **Components**: Customer Management, Inventory Tracking, Warranty & Service Tracking, Sales Pipeline, User Management.

8.3.2 **Characteristics of Their Transmittal Media**:
Data will be transmitted via APIs between various CRM modules and external systems like inventory and supply chain management tools. Data security will be ensured via HTTPS and encrypted connections.

8.3.3 **References to Related Documents**:

- **Requirements Specification Document**
- **Design Specification Document**
- **User Guide**
- **Operations Manual**

8.3.4 **References to Bug Reports Related to Test Items**:

- **Bug Report ID CRM-BUG-001**: Early bug report during the alpha phase for incorrect customer data fetching.

8.3.5 **Items Not to be Tested (Optional)**:

- **Mobile Interface**: The mobile version is not within the current scope and will be tested in a later release.

8.4 Features to be Tested

8.4.1 **All Software Features and Combinations of Features to be Tested**:

- **Customer Management**: Adding, editing, deleting, and retrieving customer information.
- **Real-time Inventory Tracking**: Monitoring stock levels and integration with supply chains for stock updates.
- **Warranty and Service Tracking**: Testing reminders for warranty expiration and the system's ability to log and track service requests.
- **Sales Pipeline**: Verifying lead tracking, sales forecasts, and report generation.
- **Role-based Access Control**: Ensuring that different user roles can only access their allowed features and data.

8.4.2 **References to Test-Design Specifications**:
Test cases will be designed based on the functional and technical requirements outlined in the design and requirement specification documents.

8.5 Features Not to Be Tested

8.5.1 **Features Not to be Tested**:

- Multilingual support and mobile interface.

8.5.2 **Reasons Features Won't be Tested**:

- These features are not included in the current release and will be tested in future phases.

8.6 Approach

8.6.1 **Overall Approach to Testing**:
Testing will be conducted in the following phases:

- **Unit Testing**: Verify individual components (Customer Management, Inventory, etc.).
- **Integration Testing**: Ensure that different components (e.g., Inventory and Sales) interact properly.
- **System Testing**: Validate the complete system against functional requirements.
- **User Acceptance Testing (UAT)**: End-users (sales, inventory managers, etc.) will test the system to ensure it meets real-world requirements.

8.6.2 **Major Activities, Techniques, and Tools**:

- **Activities**:
    - Test Planning: Defining the scope and strategy of testing.
    - Test Case Design: Developing test cases based on functional requirements.
    - Test Execution: Running test cases and documenting results.
    - Defect Management: Logging defects using JIRA or similar tools.
    - Test Reporting: Summarizing test results and defect metrics.
- **Techniques**:
    - **Black-box Testing**: Testing the system's functionality without looking at the internal code structure.
    - **Regression Testing**: Re-running previously passed tests after bug fixes to ensure new changes don't break existing functionality.
- **Tools**:
    - Postman for API testing.
    - Selenium for automated GUI testing.

8.7 Item Pass/Fail Criteria

8.7.1 **Pass/Fail Criteria**:
A test item will pass if it meets the functional and non-functional requirements specified without critical defects. It will fail if major functionality doesn't work or the defect severely impacts usability.

8.8 Suspension Criteria and Resumption Requirements

8.8.1 **Suspension Criteria**:
Testing may be suspended if critical defects are identified that block further progress, such as system crashes, broken data synchronization, or major security vulnerabilities.

8.8.2 **Testing Activities to be Redone**:
After a critical defect is resolved, the impacted test cases will be re-executed to confirm that the fixes have resolved the issue without introducing new defects.

8.9. Test Deliverables

8.9.1 **Deliverable Documents**:

- Test Plan
- Test Design Specifications
- Test Case Specifications
- Test Logs
- Test Summary Reports
- Test Incident Reports
- Defect Reports

8.9.2 **Test Input and Output Data**:
Input data will include customer details, inventory records, sales leads, and service requests. Expected output will be validated based on the requirements (e.g., correct stock levels, valid customer data, etc.).

8.10 Testing Tasks

8.10.1 **Necessary Tasks**:

- **Test Case Design**: Develop test cases for each feature based on the requirements document.
- **Test Environment Setup**: Configure servers, databases, and test data.
- **Test Execution**: Perform tests, log outcomes, and report any defects.

- **Defect Management**: Track and manage defects until resolution.

8.10.2 **Task Interdependencies**:

- **Test Execution**: Depends on the completion of test case design and environment setup.

8.10.3 **Special Skills Required**:

- Proficiency with testing tools like Selenium and Postman.
- Familiarity with CRM systems and inventory management processes.

8.11 Environmental Needs

8.11.1 **Necessary Properties of the Test Environment**:
The test environment should mimic the production environment as closely as possible:

- **Hardware**: Server with adequate CPU, memory, and storage to support the CRM's data-intensive features.
- **Software**: The CRM software, PostgreSQL for the database, and Celery for task scheduling.
- **Network**: Secure VPN access for connecting external APIs and supply chain systems.

8.11.2 **Level of Security Required**:
All sensitive data (customer info, sales data) must be encrypted during transmission. Multi-factor authentication will be enforced for accessing the CRM system.

8.11.3 **Special Test Tools Needed**:

- **Security Tools**: For testing role-based access control and ensuring data security.
- **Load Testing Tools**: To test the performance of the CRM under heavy loads.

8.12 Responsibilities

8.12.1 **Groups Responsible for Testing Activities**:

- **QA Team**: Will design test cases, execute tests, and report defects.
- **Development Team**: Will fix defects and ensure that changes don't introduce new issues.
- **Project Management Team**: Will oversee the testing process and ensure resources are allocated correctly.

8.12.2 **Groups Responsible for Providing Test Items**:

- **Development Team**: Responsible for providing the CRM software and test environment.

8.12.3 **Groups Responsible for Providing Environmental Needs**:

- **IT Support Team**: Will ensure the setup of testing environments and access to necessary hardware.

8.13 Staffing and Training Needs

8.13.1 **Staffing Needs by Skill Level**:

- 2 QA Engineers with experience in CRM testing and automation tools like Selenium.

8.13.2 **Training Options**:

- **Training on CRM Functionality**: QA engineers will receive training on CRM-specific features, such as inventory and warranty tracking.

8.14 Schedule

8.14.1 **Test Milestones**:

- **Test Plan Approval**: November 25, 2024
- **Completion of Test Case Design**: December 1, 2024
- **Test Environment Setup**: December 5, 2024
- **Test Execution Start Date**: December 10, 2024
- **User Acceptance Testing (UAT) Start Date**: January 10, 2025
- **Final Report Submission**: January 31, 2025

8.14.2 **Item Transmittal Events**:

- **Build Delivery for Testing**: December 5, 2024

8.14.3 **Estimated Time for Testing Tasks**:

- Test Case Design: 2 weeks
- Test Execution: 4 weeks
- Reporting and Review: 2 weeks

8.14.4 **Schedule for Testing Tasks and Test Milestones**:
All testing tasks will align with the project milestones and will be tracked against the defined schedule.

8.14.5 **Resource Periods of Use**:

- **QA Engineers**: Full-time engagement during test execution.

8.15 Risks and Contingencies

8.15.1 **High-Risk Assumptions of the Test Plan**:

- **Build Delays**: If development delays occur, critical tests will need to be prioritized.
- **Resource Unavailability**: Testing may be delayed if the testing environment or necessary resources are unavailable.

8.15.2 **Contingency Plans for Each**:

- **Build Delays**: Prioritize critical functionalities such as inventory tracking and customer management.
- **Resource Availability**: Set up a backup environment if primary test systems are unavailable.