Software Requirements Specification

for

Customer relationship management system

Version 1.0 approved

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Date created: 15/09/2023

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction:

1.1. Purpose:

The product we are working on is a CRM system software. A CRM system is designed to help businesses manage and improve their relationships with customers, streamline sales and marketing efforts, and enhance overall customer satisfaction.

Purpose:

1. ***Improve Customer Relationships:*** *The primary purpose of the CRM system is to enhance customer relationships by providing a 360-degree view of customer interactions and preferences. This allows businesses to offer personalized services and communication.*
2. ***Increase Sales Efficiency:*** *By streamlining sales processes, automating lead management, and providing sales teams with the necessary tools, the CRM system aims to boost sales productivity and revenue.*
3. ***Enhance Marketing Effectiveness:*** *The CRM system helps marketing teams target the right audience, track campaign performance, and nurture leads, ultimately leading to more effective marketing strategies.*
4. ***Enhance Customer Support:*** *It facilitates efficient handling of customer inquiries and support requests, leading to quicker issue resolution and improved customer satisfaction.*

1.2. Document Conventions

Important points have been highlighted in red colour.

1.3. Intended Audience and Reading Suggestions

The intended audience are the customers, external stakeholders, IT department, Product development teams, Customer service and support teams, sales and marketing teams.

1.4. Product Scope :

1. ***Customer Data Management:*** *The CRM system will allow users to capture, store, and update customer information, including contact details, purchase history, preferences, and interactions.*
2. ***Sales Management:*** *The CRM system will support sales teams by providing tools for lead management, opportunity tracking, and sales forecasting. It should also facilitate order processing and invoice generation.*
3. ***Marketing Automation:*** *The CRM system will enable marketing teams to create and manage campaigns, track customer engagement, and segment the customer base for targeted marketing efforts.*
4. ***Customer Service and Support:*** *The CRM system should include features for tracking customer inquiries, issues, and support tickets, ensuring timely resolution and effective customer communication.*
5. ***Reporting and Analytics:*** *It should offer robust reporting and analytics capabilities to provide insights into customer behavior, sales performance, and marketing effectiveness.*

1.5. References

1.6. Product Perspective

A customer relationship management (CRM) solution helps you find new customers, win their business, and keep them happy by organizing customer and prospect information in a way that helps you build stronger relationships with them and grow your business faster. CRM systems start by collecting a customer's website, email, telephone, social media data, and more, across multiple sources and channels.

It may also automatically pull in other information, such as recent news about the company's activity, and it can store personal details, such as client's personal preferences on communications. The CRM tool organizes this information to give you a complete record of individuals and companies overall, so you can better understand your relationship over time.

1.7. Product Functions

1) ***Identify and categorize leads:***
   A CRM system can help you identify and add new leads easily and quickly, and categorize them accurately. By focusing on the right leads, sales can prioritize the opportunities that will close deals, and marketing can identify leads that needs more nurturing and prime them to become quality leads. With complete, accurate, centrally held information about clients and prospects, sales and marketing can focus their attention and energy on the right clients.

2) ***Increase referrals from existing customers:***
   By understanding your customers better, cross-selling and upselling opportunities become clear – giving you the chance to win new business from existing customers.

   With better visibility, you'll also be able to keep your customers happy with better service. Happy customers are likely to become repeat customers, and repeat customers spend more – up to 33% more according to some studies.

1.8. User Classes and Characteristics

1) ***Leads manager –***
   A leads manager acquires information about potential customers and feeds the data into the CRM application.

2) ***Sales Executives –***
   A sales executive refers to the leads and tries to contact each potential customer and then execute the sale.

3) ***Admin –***
   An admin manages the entire system and the users in the system. They create the new users and manage existing ones. They also make changes to various aspects of the CRM application.

4) ***Support Executive -***
   A support executive handles existing customers and offers them after-sales support.

1.9. Operating Environment

Web based application that runs on a modern browser. It uses Python and the Flask framework on the server side and MySQL as the backend.

1.10. Design and Implementation Constraints

Regulatory Compliance: *Beyond data privacy regulations, other industry-specific regulations, such as financial or healthcare compliance standards, may impose additional constraints on data handling and reporting.*

Scalability: *The CRM system should be designed to handle growth in terms of the number of users, customers, and data volumes. Scalability constraints may include database performance, server infrastructure, and load balancing.*

Cross-Platform Compatibility: *The CRM system may need to be accessible across various operating systems and web browsers, leading to constraints related to cross-platform compatibility and user experience.*

Performance and Response Time: *Constraints related to performance, such as response times for data retrieval and reporting, should be defined to ensure that the CRM system meets user expectations.*

1.11. User Documentation

https://help.aurea.com/crm/

1.12. Assumptions and Dependencies

1) *Cloud based VPS for SaaS implementation*
2) *Preferably Linux based server running Python 3.7+*
3) *Flask framework installed.*
4) MySQL installed

3. External Interface Requirements

3.1. User Interfaces

Web Based UI based on Bootstrap
Requites a modern web browser. It uses responsive design to automatically adapt to the screen size of the device being used which makes it usable even on smartphones.

3.2. Hardware Interfaces

Requires server infrastructure that can effectively handle a large network load depending upon the size of the organization. Large number of servers with extensive support system.

3.3. Software Interfaces

1.) Python 3.5+
2.) Flask Framework
3.) Jinja2 Template Engine
4.) MySQL
5.) Modern Web Browser

3.4. Communications Interfaces

***1.User Interfaces**:*

Graphical User Interface (GUI): Describe the visual interface through which users will interact with the CRM system. Include details about the layout, design, and functionality of the GUI.

Command-Line Interface (CLI): If applicable, describe how users can interact with the CRM system through a command-line interface.

2.Application Programming Interfaces (APIs):

RESTful APIs: If your CRM system will expose RESTful APIs for integration with other systems or third-party applications, specify the endpoints, HTTP methods, request/response formats, and authentication mechanisms.

SOAP APIs: If SOAP-based web services are used, provide details on the service operations, input/output message formats, and authentication methods.

3.Integration Interfaces:

Database Interfaces: Specify how the CRM system will interact with the underlying database(s). Include details about database management systems, data models, and query languages.

External System Interfaces: Describe how the CRM system will communicate with external systems, such as email servers, payment gateways, or third-party APIs.

4. System Features

4.1 Leads Management

Leads management is one of the primary functions of the CRM. The CRM system is used to maintain information about all the potential customers which can be turned over to sales executives.

4.2 Sales Management

The sales department will follow the available leads and try to execute a sale and turn the leads into customers.

4.3 After Sales Support

The CRM must be able to handle the needs of existing customers whose relationship with the organization is not over yet. Support for services or products that are in the warranty period or eligible for after sales support must be provided

4.4 Administration

The entire CRM system can be maintained and altered to suit the organization's needs at any time. The administrator can create new users, manage existing ones and alter the structure of the data in the CRM when necessary

5. Other Nonfunctional Requirements

5.1. Performance Requirements:

The CRM must be a high availability system with 99.9% uptime. Any downtime can potentially result in loss of revenue for the company.
It must be able to handle a large network overhead without any performance latency.

5.2. Safety Requirements:

All the data in the database should be regularly backed up and several redundancies must be maintained in the case of a catastrophic failure of storage systems.

5.3. Security Requirements:

The CRM must be protected against DDOS attacks that might result in downtime and loss of revenue for the company. Load balancing must be performed in such cases and services like Cloud Flare should be used to automatically mitigate such attacks.

5.4. Software Quality Attributes:

It is imperative to address various software quality attributes to ensure a successful and user-friendly product. This includes prioritizing usability through an intuitive interface and accessibility compliance. Reliability should be emphasized with high availability and fault tolerance measures. Performance considerations should encompass acceptable response times and scalability for data and user loads. Security features must include data protection measures, authentication, and authorization protocols. Compatibility should address platform support and integration requirements. Maintainability should focus on modularity and comprehensive documentation. Scalability must be planned for future growth, and testability should include rigorous testing procedures. Flexibility and customization should enable user configuration and extension capabilities. Compliance with regulatory standards, where applicable, is crucial. Effective data management strategies covering migration and archiving should be defined. Finally, user support and training resources should be outlined to ensure smooth adoption and efficient operation of the CRM system.

5.5. Business Rules:

The CRM system's business rules are designed to ensure efficient and secure management of customer relationships and data. User access and authentication procedures must be robust, with role-based privileges clearly defined. Customer data must be stored securely and maintained with data integrity rules. The system facilitates lead and contact management, assigning leads to sales representatives and detecting duplicates. Opportunities and the sales pipeline are tracked with defined stages and probabilities for revenue forecasting. Communication and interaction tracking are central, with support for multiple channels and automated reminders. Task and appointment management features enhance productivity, prompting follow-up actions and tasks to nurture customer relationships effectively.

6. Other Requirements

Uncovered in other areas of the Software Requirements Specification (SRS), the following additional requirements may be pertinent to a Customer Relationship Management (CRM) system:

1. Database Requirements: - A relational database management system (RDBMS), such as MySQL, PostgreSQL, or Oracle, should be supported by the CRM system.
- The database should be set up to effectively store and manage client information, such as contact details, purchase histories, and correspondence logs.
- Access controls and data encryption should be put in place to protect client data's security and privacy.

2. Internationalisation Requirements: To serve a user base that is international, the CRM system must handle several languages.
- It ought to support regional choices for date formats, currency symbols, and other elements.

3.Legal prerequisites:

Ensure adherence to applicable data privacy rules based on the system's deployment region, such as GDPR (General Data Protection Regulation) in Europe, HIPAA (Health Insurance Portability and Accountability Act) in the United States, or any other applicable data privacy legislation.

According to legal requirements, offer tools for data access, rectification, and erasure.

4.Goals for Reuse:

Recognize and record any parts, modules, or lines of code that can be utilized with other programs or libraries from other companies.
To reduce development work and preserve consistency, design a plan for code reuse.

5.Performance Standards:

Indicate the system performance characteristics that should be expected, such as throughput, response times, and the ability to scale to manage a growing user base and volume of data.

Establish performance standards and do tests to make sure the CRM system complies with these demands.

6.Integration prerequisites:

Describe any external services or systems that the CRM system needs to connect to, such as e-commerce platforms, email marketing platforms, or social networking APIs.

For smooth integration, specify data exchange formats (like JSON and XML) and protocols (like RESTful APIs).

7.Security prerequisites:

To ensure that only authorized users can access and edit customer data, provide authentication and authorisation protocols.

Encrypt data transfer and storage, especially when dealing with sensitive client data.

8.Requirements for Reporting and Analytics:

Describe the different kinds of data and analytics the CRM system should offer, such as performance dashboards, sales projections, and customer insights.

9. Needs for backup and recovery:

Create a backup and disaster recovery plan to guard against data loss in the event of emergencies or system failures.
Establish the frequency of backups, the retention guidelines, and the recovery processes.

10.Regulatory Conformity:

Make that the CRM system conforms with any rules unique to your company, such as those that apply to the legal, financial, or healthcare sectors.

Appendix A: Glossary

- Definitions, Acronyms and Abbreviations

Terms	Definition
[redacted]	

Terms	Definition
[redacted]	

Appendix B: Analysis Models

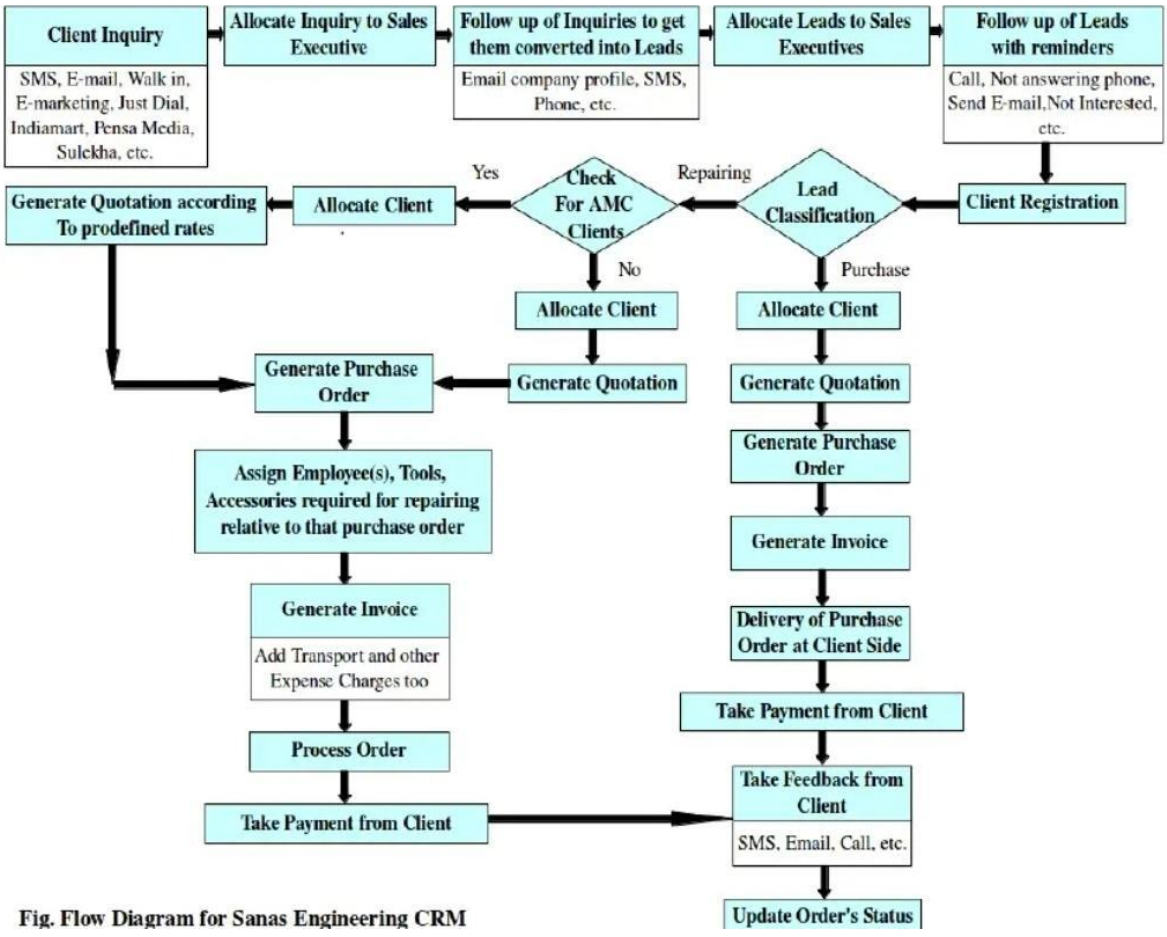

Fig. Flow Diagram for Sanas Engineering CRM

Appendix C: To Be Determined List