**####**

Pharmacy Management System

**Interim Report**

**ICT2233 - Software Engineering**

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**Submission Date:** 2023/00/00



Bachelor of Information and Communication Technology.

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**Declaration**

“We certify that this project does not incorporate without acknowledgment, any material previously submitted for an assignment in any institution, and to the best of my knowledge and belief, it does not contain any material previously published or written by another person or myself except where due reference is made in the text. I also hereby give consent for my dissertation, if accepted, to be made available for photocopying and for interlibrary loans, and for the title and summary to be made available to outside organizations”.

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**Acknowledgement**

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We wish to extend our thanks to all colleagues and friends who have been a constant source of motivation and camaraderie. Your discussions, brainstorming sessions, and moral support have been integral to this undertaking.

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**Chapter 1: Introduction**

We propose to design and build a thorough pharmacy shop management application that will streamline business processes and ensure effective staff management, customer engagement, medication inventory control, precise financial tracking, formal communication facilities (email), remote medication distribution, and strong reporting capabilities. The app will target both small and large pharmacies and be user-friendly and accessible.

* 1. **Statement of the problem**

Due to manual processes, many small- and medium-sized pharmacies find it difficult to operate their business effectively, which causes mistakes in the management of inventory, customers, and finances.

Inefficiencies and significant revenue losses result from the lack of a centralized system for managing the inventory of medicines, customer information, and employee data.

* 1. **Aims and Objectives**

The project's goal is to provide a user-friendly, effective Pharmacy Shop Management Application that improves the workflow of pharmacy operations as a whole. The precise goals consist of:

1. Managing personnel Information: Create a module that makes it simple to handle personnel details such identities, responsibilities, and schedules.

2. Managing Customers: Create a customer management module that simplifies order history, communication, and customer registration.

3. Managing Medicine: Develop a module to check stock levels, expiration dates, and enable reordering alerts for medicines.

4. Managing Financials: Create a module for accounting and invoicing so that revenues, expenses, and client bills can all be tracked accurately.

5. Reporting: Create a reporting module that offers details on sales patterns, inventory turnover, profit margins, and other important performance metrics.

6. Formal Communication: Create a module that enables communication with clients and vendors.

7. Remote pharmaceutical Distribution: Create a pharmaceutical distribution module that offers consumers precise and efficient service.

* 1. **Scope of project**

1.Planning the project (Week 1):

- Specify the project's goals, objectives, and needs.

- Divide up team members' roles and tasks.

- Create lines of communication to facilitate productive teamwork.

|  |  |  |  |
| --- | --- | --- | --- |
| **Task** | **Duration (Days)** | **Start** | **End** |
| Planning the project | 07 | 19/08/2023 | 25/08/2023 |

2.Designing UI/UX (Week 2):

- Produce mockups and wireframes for the user interface of the program.

- Collect suggestions and improve the design for the best user experience.

|  |  |  |  |
| --- | --- | --- | --- |
| **Task** | **Duration (Days)** | **Start** | **End** |
| Designing UI | 07 | 26/08/2023 | 31/08/2023 |

3. Database design (Week 3):

- Create a database schema to contain information about the personnel, customers, medications, and finances.

- Ensure scalability and data integrity.

|  |  |  |  |
| --- | --- | --- | --- |
| **Task** | **Duration (Days)** | **Start** | **End** |
| Database Design | 07 | 26/08/2023 | 31/08/2023 |

4.Development on the front end (Week 4):

- Create user interfaces for different modules utilizing cutting-edge JavaFX technologies.

Develop a responsive design strategy.

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| --- | --- | --- | --- |
| **Task** | **Duration (Days)** | **Start** | **End** |
| Development on the front end | 07 | 01/09/2023 | 07/09/2023 |

5.Development on the back end (Week 5):

- Create the essential logic and features of the program.

- Connect the front end to the back-end services and database.

|  |  |  |  |
| --- | --- | --- | --- |
| **Task** | **Duration (Days)** | **Start** | **End** |
| Development on the back end | 07 | 08/09/2023 | 14/09/2023 |

6. Quality assurance and testing (Week 6):

- Carry out exhaustive testing to find and address any flaws or problems.

- Ensure system stability and data security.

|  |  |  |  |
| --- | --- | --- | --- |
| **Task** | **Duration (Days)** | **Start** | **End** |
| Quality assurance and testing | 07 | 15/09/2023 | 21/09/2023 |

7.Documentation (Week 7):

- Produce thorough documentation for installation, upkeep, and user instructions.

|  |  |  |  |
| --- | --- | --- | --- |
| **Task** | **Duration (Days)** | **Start** | **End** |
| Documentation | 01 | 22/09/2023 | 29/09/2023 |

8.Deployment and Training (Week 8):

- Install the application on a client machine or hosting platform.

- Teach pharmacy personnel how to use the system efficiently.

|  |  |  |  |
| --- | --- | --- | --- |
| **Task** | **Duration (Days)** | **Start** | **End** |
| Select a client | 07 | 30/09/3023 | 06/10/2023 |

9.Finalisation and Presentation (Week 9):

- Check the application one last time to make sure all requirements have been completed.

- Create a presentation that highlights the features and functionality of the program.

|  |  |  |  |
| --- | --- | --- | --- |
| **Task** | **Duration (Days)** | **Start** | **End** |
| Select a client | 07 | 07/10/2023 | 13/10/2023 |

* 1. **Gantt Chart**

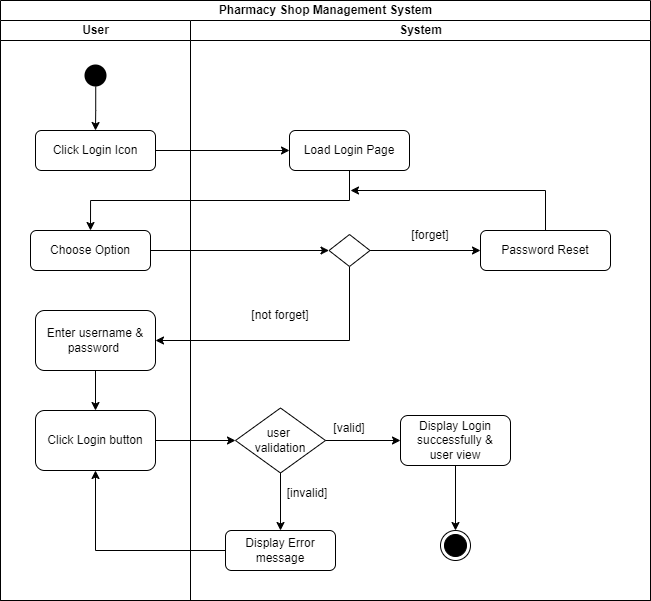
**Chapter 2: System Analysis and Design**

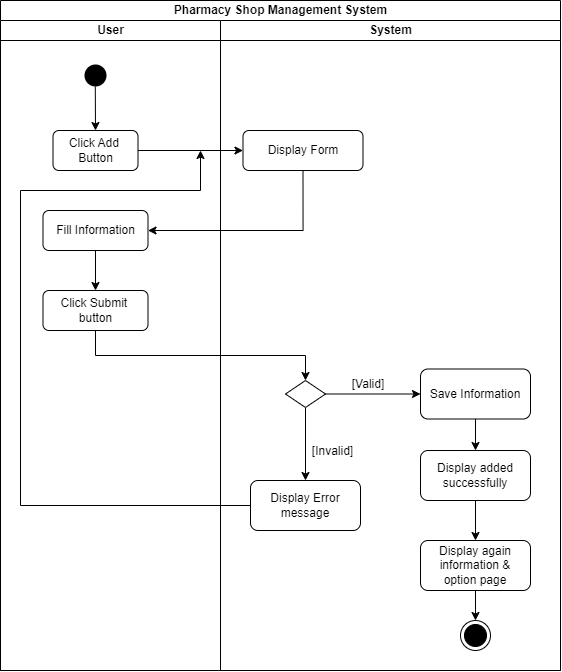
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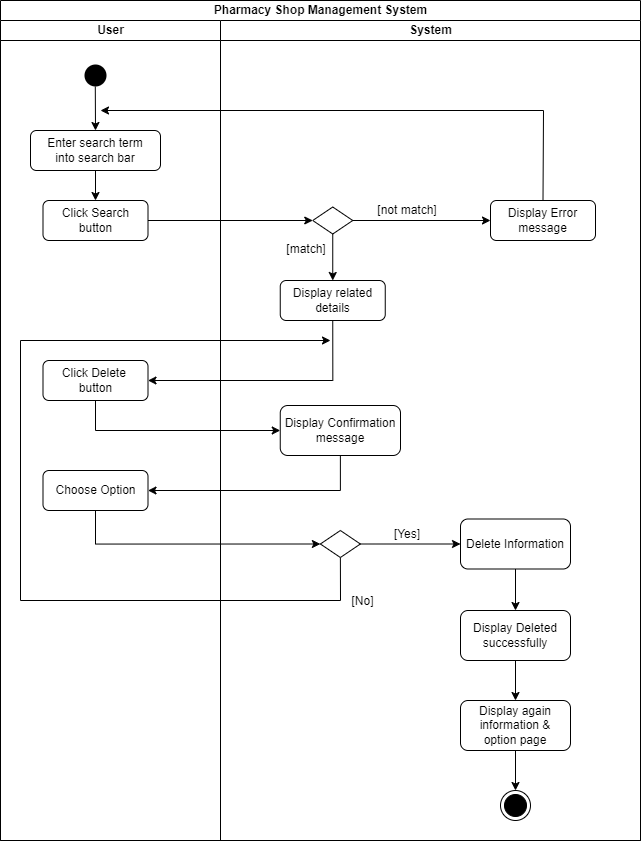
A diagram of a software server

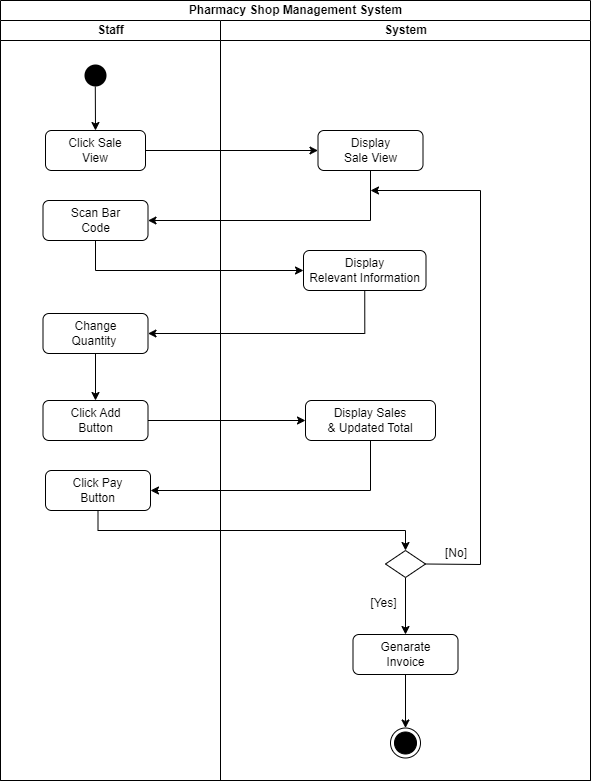
Description automatically generated **2.2 Use case narratives**

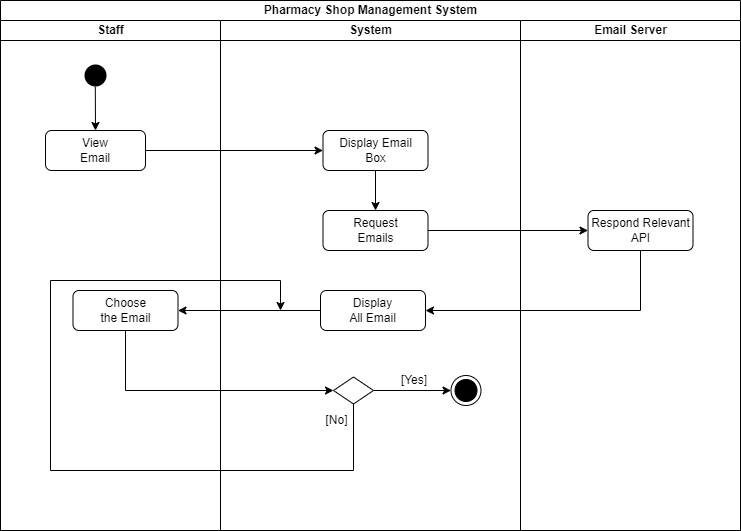
**2.3 Activity diagrams**

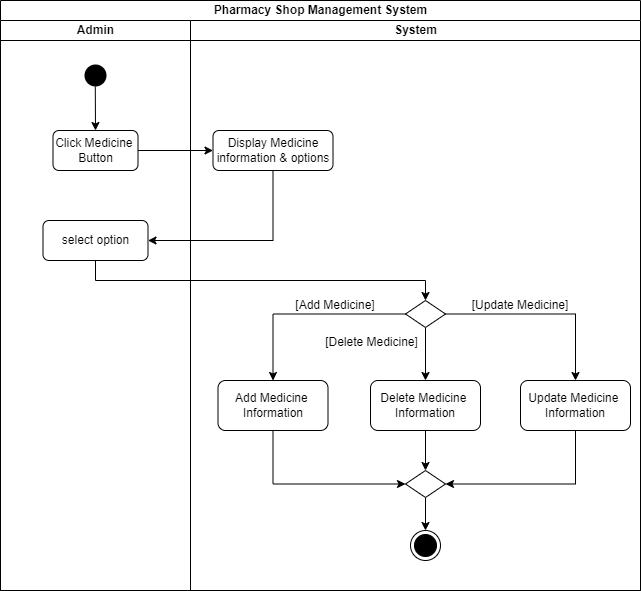
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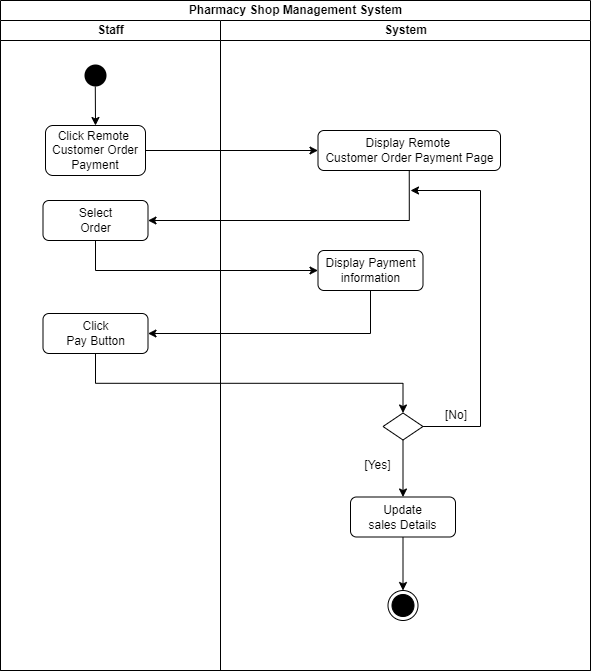
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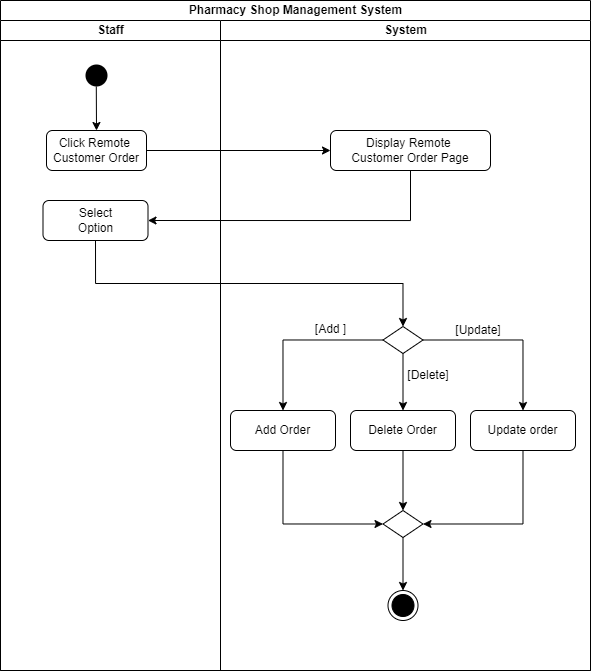
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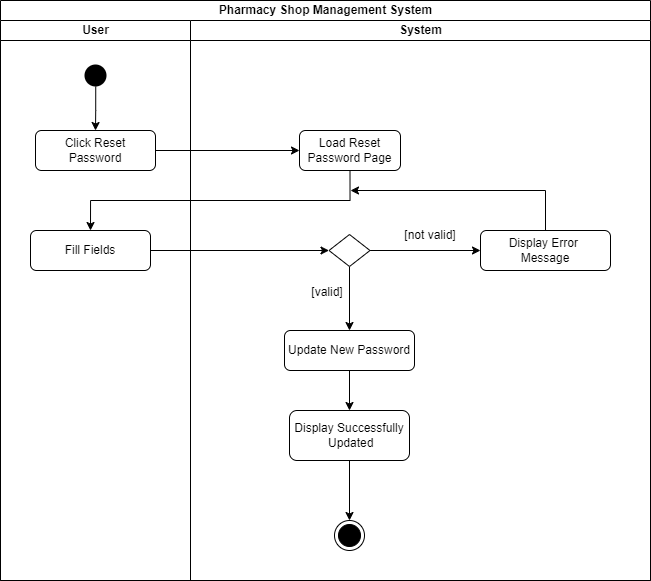
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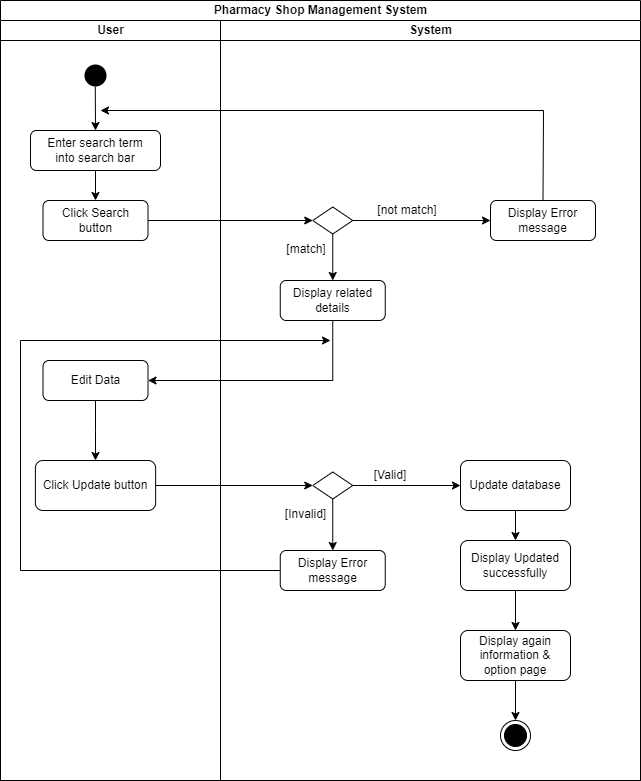
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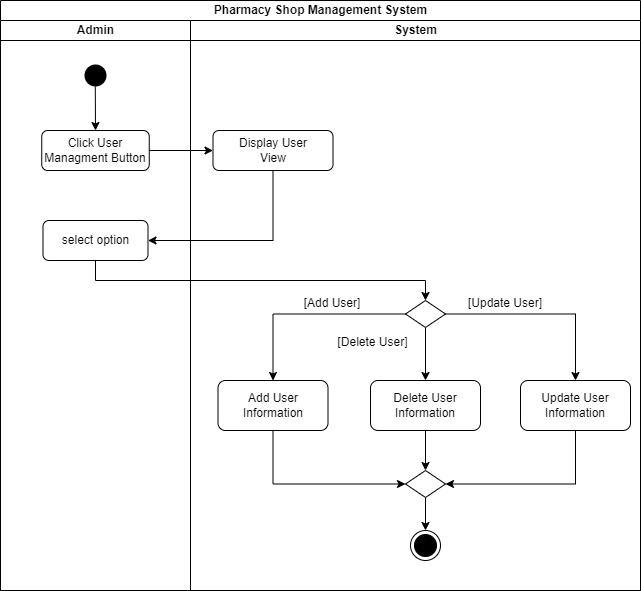
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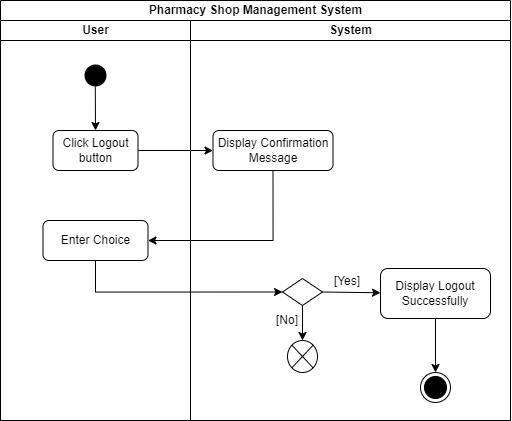
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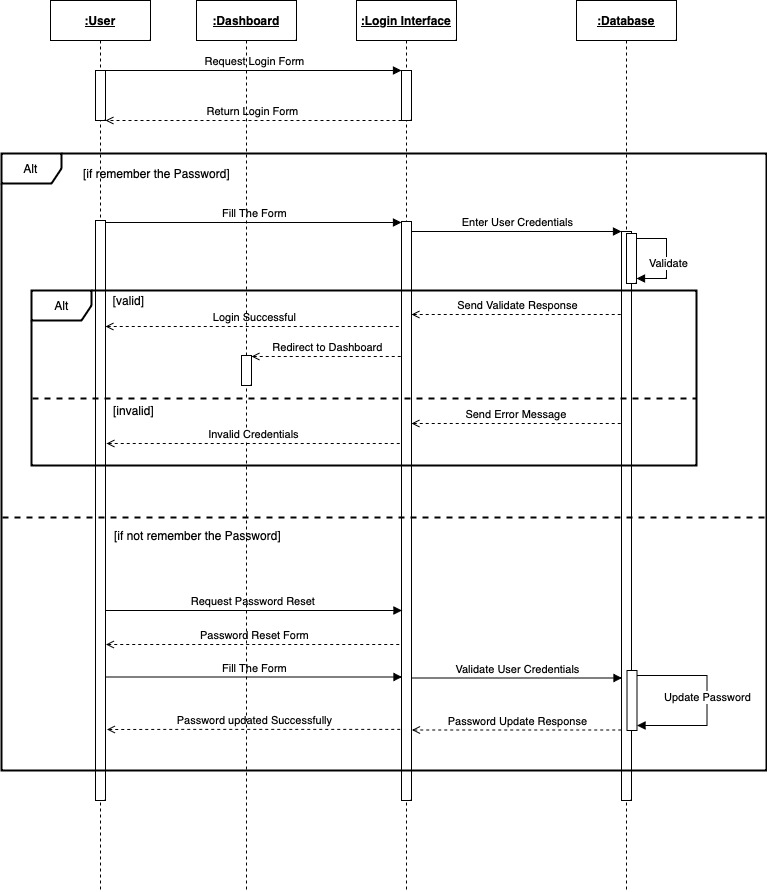
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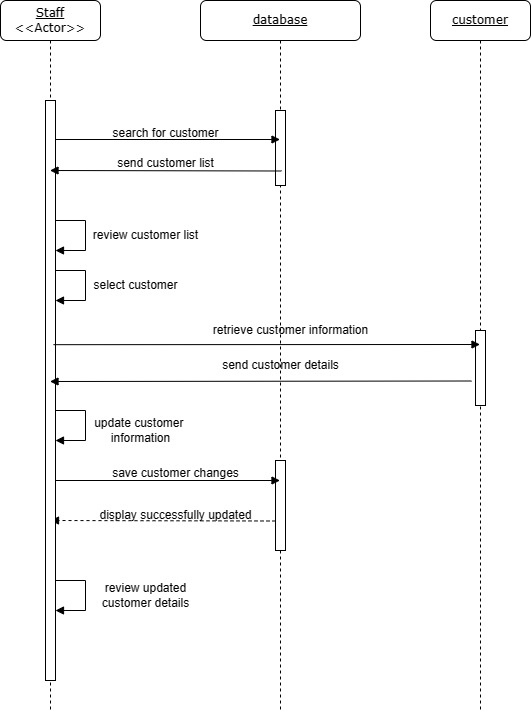
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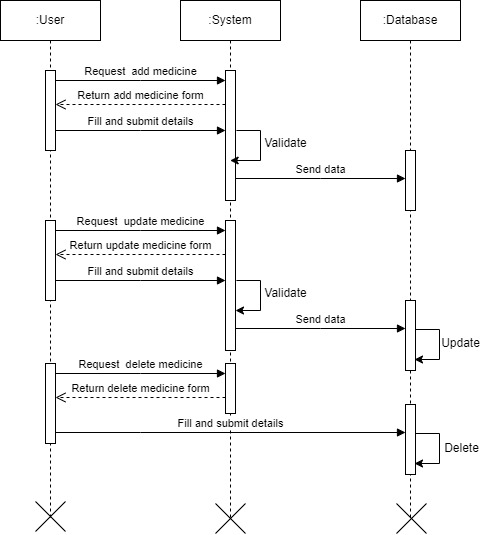
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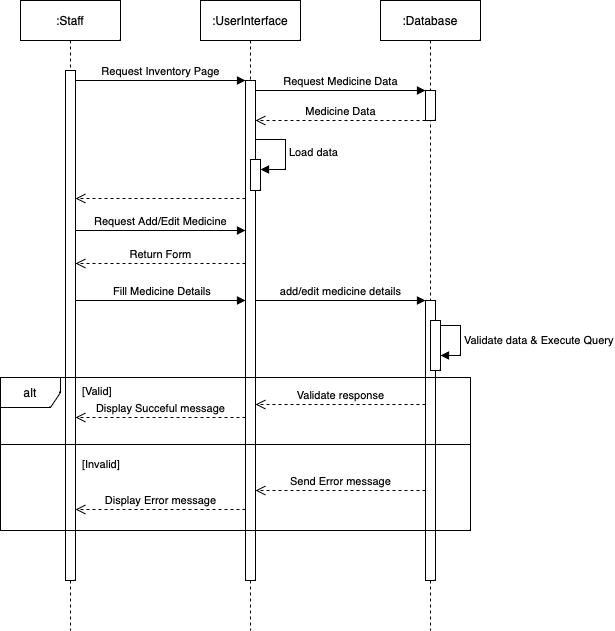
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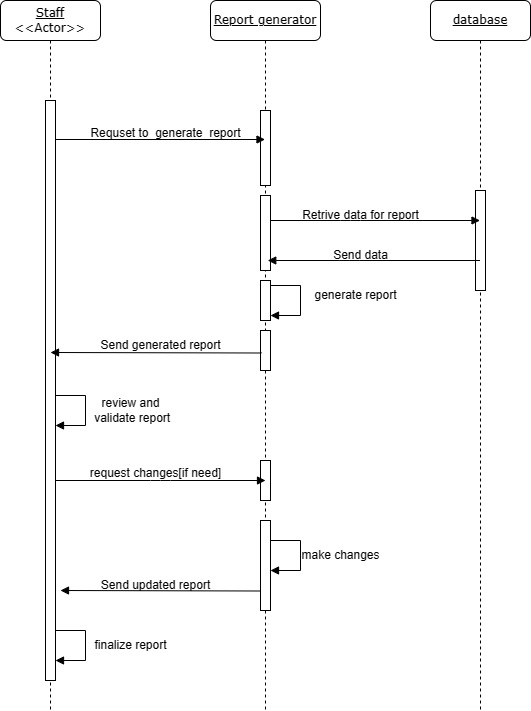
**2.4 Sequence Diagrams**

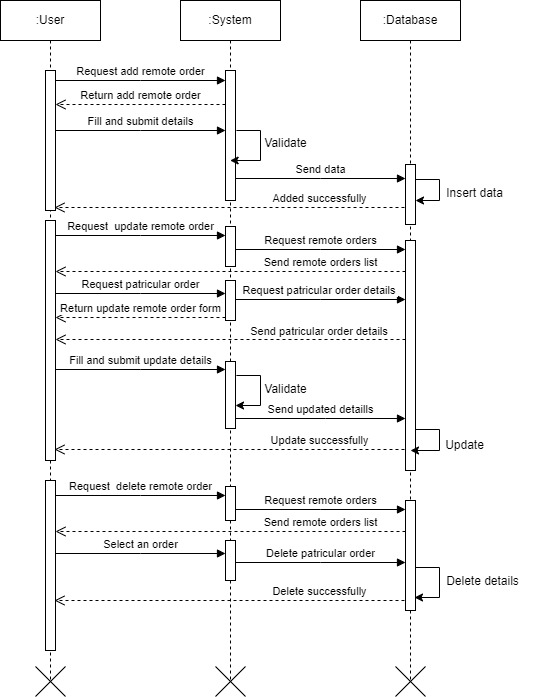
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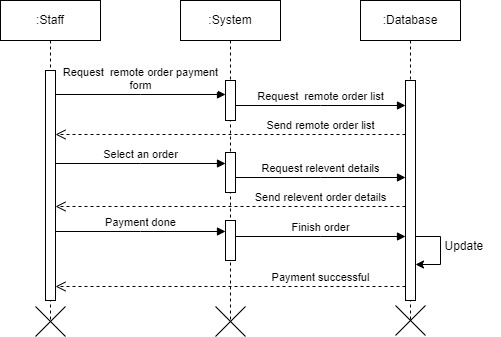
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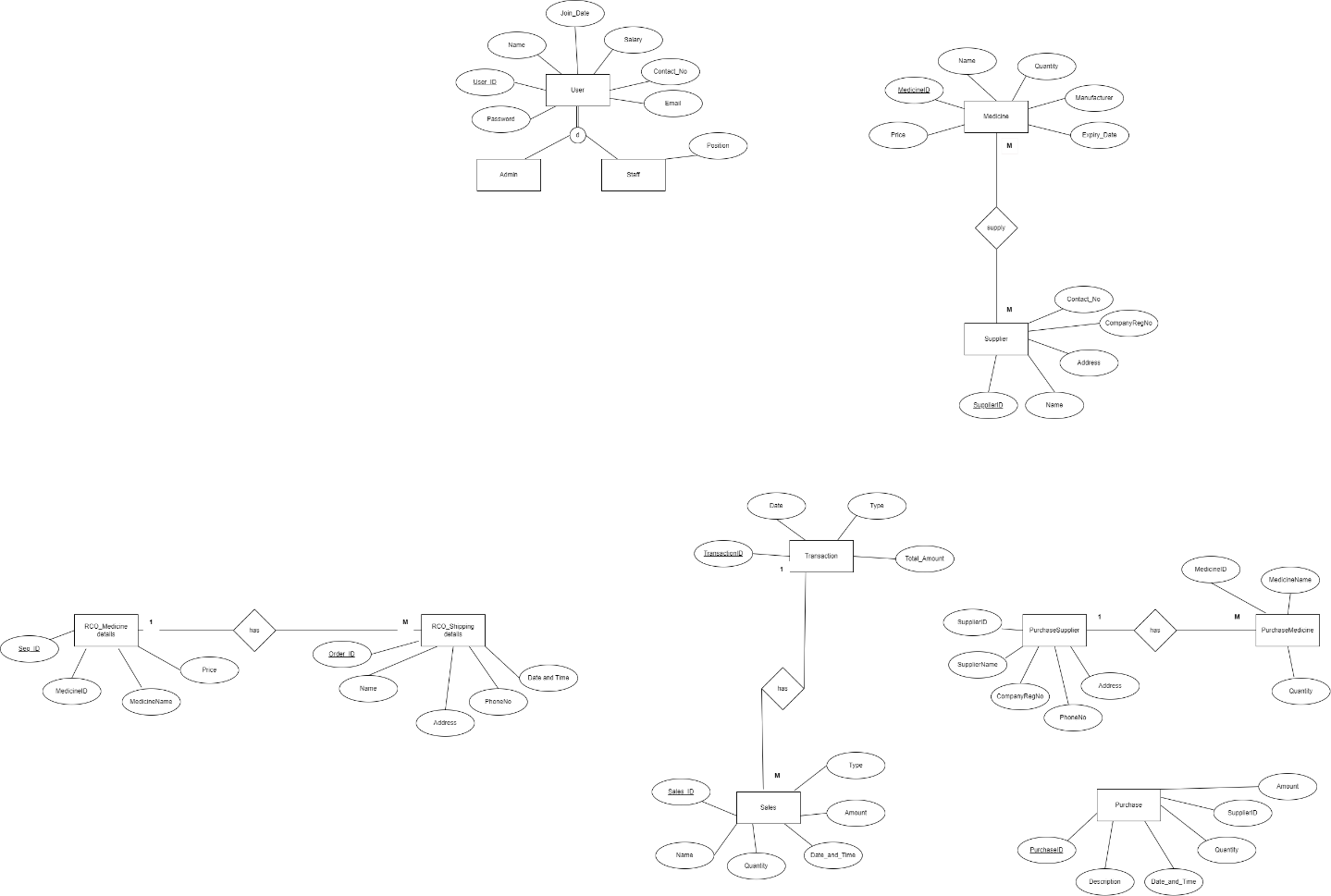
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**2.5 ER Diagram**

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**2.6 Software Requirement Specification**

**Functional requirements**

A Functional Requirement is a document that describes the essential technical requirements of a system or feature, including the procedures by which it can be determined that requirements have been met. The following points represent the functional requirements of pharmacy management system.

|  |  |
| --- | --- |
| **ID** | **Description** |
| **Admin** | |
| 1 | Shall be able to log in to the system. |
| 2 | shall be able to create, view, update, delete, customers. |
| 3 | Shall be able to create, view, update, delete staff. |
| 4 | Shall be able to manage user accounts. |
| 5 | Shall be able to generate and manage reports. |
| 6 | Shall be able to add, delete, update, and view medicine. |
| 7 | Shall be able to manage customer orders. |
| 8 | Shall be able to manage payments. |
| 9 | Shall be able to view available medicine stock. |
| **Staff** | |
| 1 | Shall be able to log in to the system. |
| 2 | Shall be able to view customer orders. |
| 3 | Shall be able to manage payments. |
| **Customer** | |
| 1 | Shall be able to log in to the system. |
| 2 | Shall be able to place orders. |
| 3 | Shall be able to make payments. |

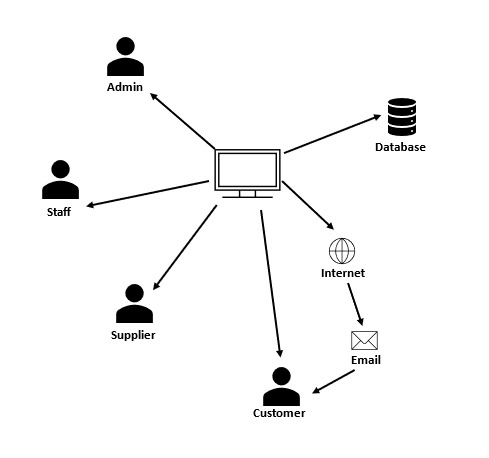
**Non-functional requirements**

Non-functional requirements are the requirements that are not directly affect to the system. [1]

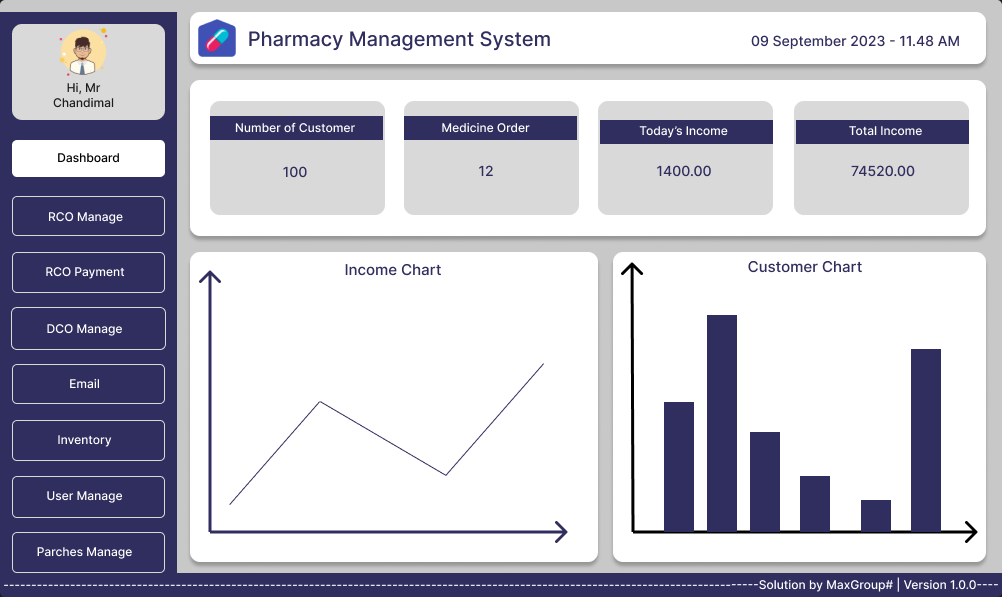
* Performance and scalability. How fast does the system return results? How much will this performance change with higher workloads?
* Portability and compatibility. Which hardware, operating systems, and browsers, along with their versions does the software run on? Does it conflict with other applications and processes within these environments?
* Reliability, maintainability, availability. How often does the system experience critical failures? How much time does it take to fix the issue when it arises? And how is user availability time compared to downtime?
* Security. How well are the system and its data protected against attacks?
* Localization. Is the system compatible with local specifics?
* Usability. How easy is it for a customer to use the system?

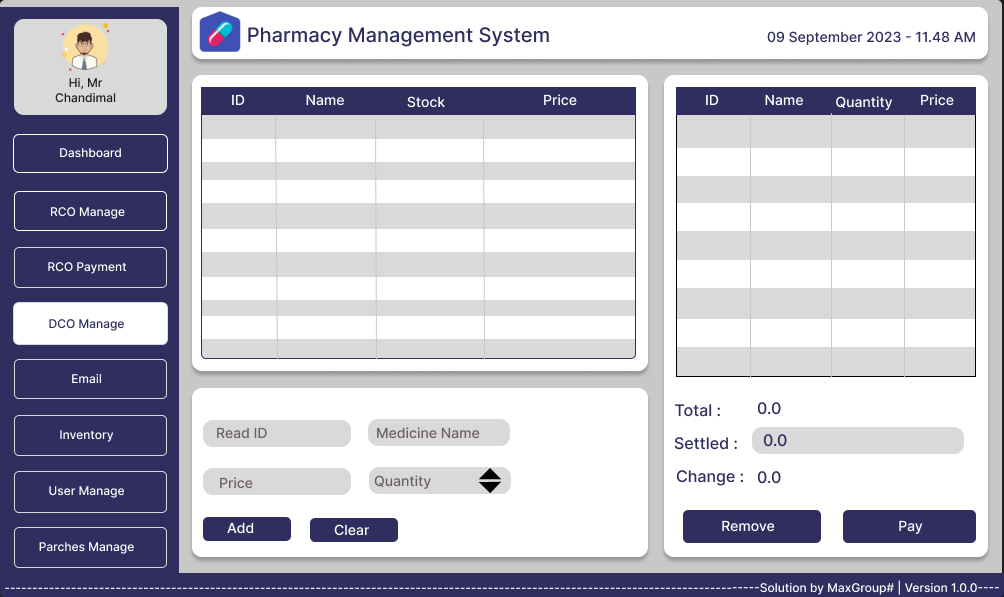
**Chapter 3: Proposed System Design**

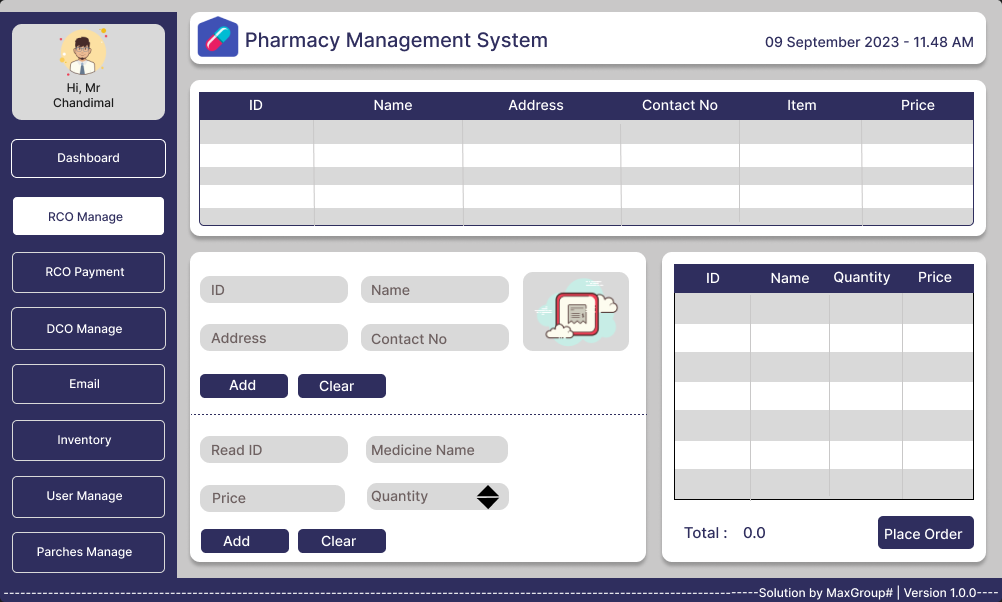
**3.1 Architecture Design**

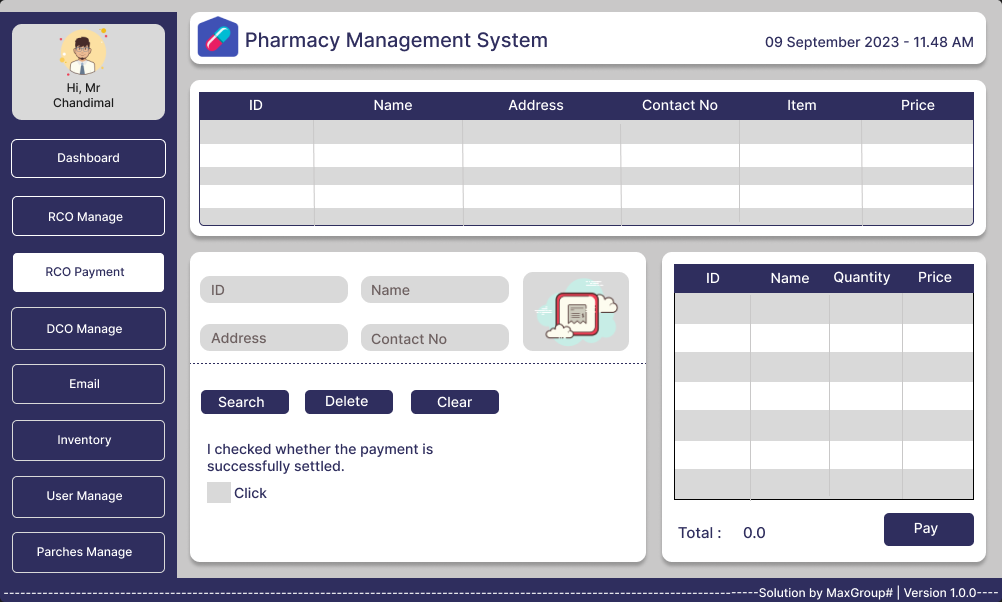


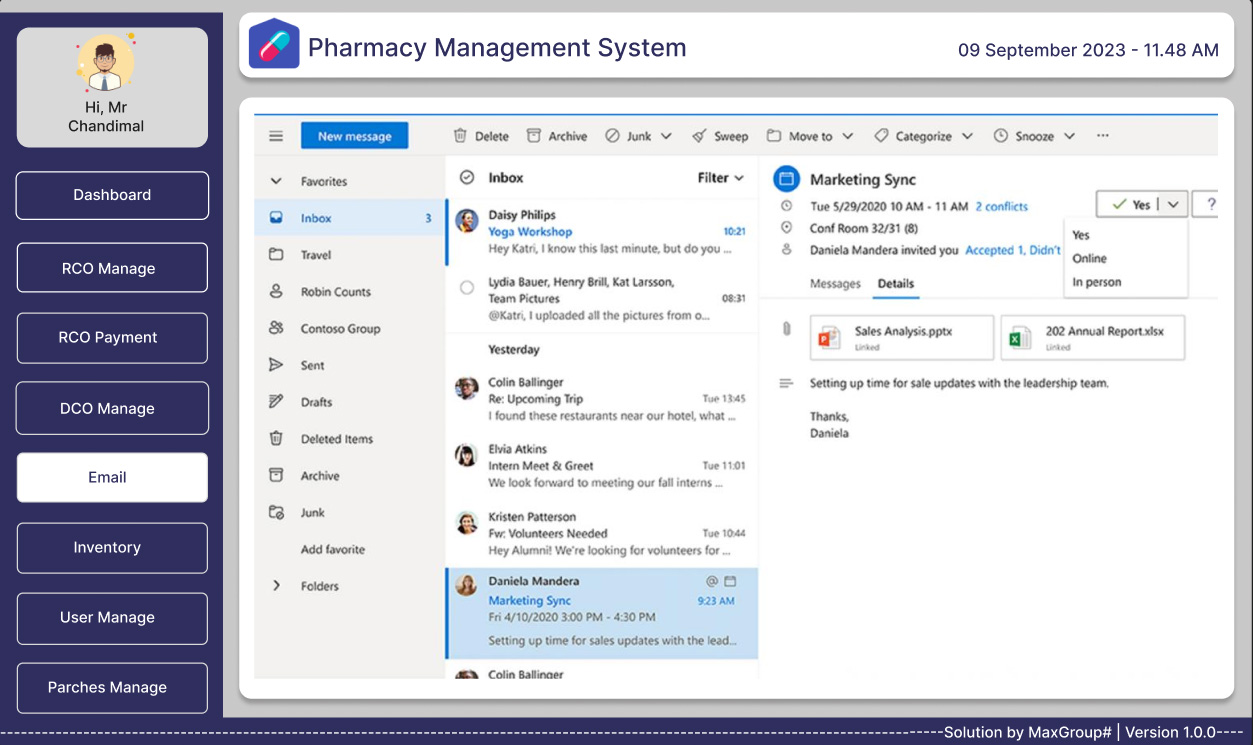
**3.2 Proposed System Interfaces**











**3.3 Report Design**

**3.4 Test plan for the system**

**References**

[1] <https://www.altexsoft.com/blog/non-functional-requirements/#:~:text=Non%2Dfunctional%20requirements%20or%20NFRs,reliability%2C%20data%20integrity%2C%20etc>.