

# **APKI DAWAI**

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A project submitted in partial fulfillment of the degree of

BS in Computer Science



Department of Computer Science

Faculty of Computer Science & Information Technology

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\*The candidates confirm that the work submitted is their own and appropriate credit has been given where reference has been made to work of others.

### Plagiarism Free Certificate

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# Project Report

## APKI DAWAI

### Change Record

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# Project Report

## APKI DAWAI

### APPROVAL

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#### PROJECT MANAGER

Comments: \_\_\_\_\_

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Date: \_\_\_\_\_ Signature: \_\_\_\_\_

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## **Dedication**

This project is especially dedicated to the teachers who helped and guided us to successfully complete this project work.

## **Acknowledgements**

I want to sincerely thank my Supervisor, Ma'am Maria Iqbal, for her excitement, patience, insightful remarks, valuable information, wise counsel, and never-ending suggestions, all of which have been of great assistance to me throughout the research and drafting of this report. I could not have asked for a finer study supervisor. I also want to sincerely thank Superior University for allowing me to enroll in the graduate program.

## Executive Summary

Apki Dawai is a web-based application which consist of both front end and back-end database. The main purpose of this project is to manage online medical shop. Our system consists of customer, admin, and doctor for advice and delivery guy, where admin can handle stock of medicines and delivery boys and workers. And customer can see medicines and request the medicine, if he want, he can talk to doctor for simple problems which is free of cost. We will give him medicine with fast or normal delivery. As you know Covid-19 is ongoing so, it is very difficult for people to go outside and buy medicine. In hospitals and clinics doctors have very high fee for simple patients. Many customers have complaints about incomplete medicines or delivery guy stole some medicines. Many people have issues with medicine prices. Some people have issues about the quantity of medicines the store force them to purchase extra number of medicines or they won't deliver their medicines. Here are some additional features like login, create account, system will recommend different medicines for same problem depends on their price, Discount, live chat, payment method, unlimited searching and also fast delivery.so what is new for customers here is fast delivery, free doctor advice with live chat and also some more features we will add during project development.

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# Chapter 1

## **Introduction**

# Chapter 1: Introduction

Apki Dawai is a web-based application which will provide medicines on your door step. You can pay with online or with offline methods. Customer can view or buy medicines by following easy steps. We are willing to add live chat and other features and different payment methods. We want to insure on time delivery and we are willing to add more features.

## 1.1. Background

As you know Covid-19 is ongoing so, it is very difficult for people to go outside and buy medicine. In hospitals and clinics doctors have very high fee for simple patients. Thirdly, people want fast service. These are some problems we see in our daily life related to human life now days our system will overcome these problems by delivering them online fast delivery give advice to patient for simple problems freely without fee charging if they want to visit our website. We deeply see other related applications on google play and we come to know some problems with them many customers have delivery time problems they don't deliver on time and most of the time they deliver after 2 or 3 days.

## 1.2. Motivations and Challenges

We deeply see other related applications and other websites with that we come to know some problems with them many customers have delivery time problems they don't deliver on time and most of the time they deliver after 2 or 3 days. Many customers have complaints about incomplete medicines or delivery guy stole some medicines. Many people have issues with medicine prices. Some people have issues about the quantity of medicines the store force them to purchase extra number of medicines or they won't deliver their medicines.

## 1.3. Goals and Objectives

We want to deliver excellent medicines and excellent service on time to generate our place in market. With time we want to come on all plate forms like on google play and on apple store but for now our target is website which will be a detailed website for different things. By

watching already present solutions our main goal is to deliver on time with good service and in reasonable price.

#### **1.4. Literature Review/Existing Solutions**

There are many existing solutions in market but after deeply watching them we come to know many of them are scamming people by charging more and by not delivering exact service which they promise also they have problems in delivering on time. So, we want to come over them to make our place.

#### **1.5. Gap Analysis**

We want to start from basic service and by fulfilling our main goals and expectations with them we want to create other things and services in our site to come over all services. It is the best way to come in any business by starting from basic and go to extreme by this we can handle all things quite perfectly.

#### **1.6. Proposed Solution**

In case of proposed solution, we have same medicines which are from different companies because different people trust different brands, free advice from doctor with live chat for simple problems, unlimited searching and also fast delivery and also low price. We will make sure the quality and quantity of the delivered medicine. Justify our prices. We will also recommend you generic medicines related to your searched medicine it will help you in choosing your medicine. You can also reorder your previously ordered medicine to avoid searching about same medicine again you have to login for that. We will also provide some discount or cashback on first order. You can also get information about simple problems on live chat. You can pay through Easy paisa, jazz Cash bank transfer or use Cash on delivery option. You can also select delivery option like you want fast or normal delivery of your medicine. You can also see the Expiry date of your medicine which you are purchasing and some details related to medicine.

## **1.7. Project Plan**

To fulfil our goals, we want to start it from a city and from that we want to expand it to province and then to country level. By this we can manage the things in better way.

### **1.7.1. Work Breakdown Structure**

We have broken our work down into three parts as we are three members in a group, we will work accordingly by dividing our work into three equal parts and will make sure to understand all the work done by a member other member can also easily understand it too.

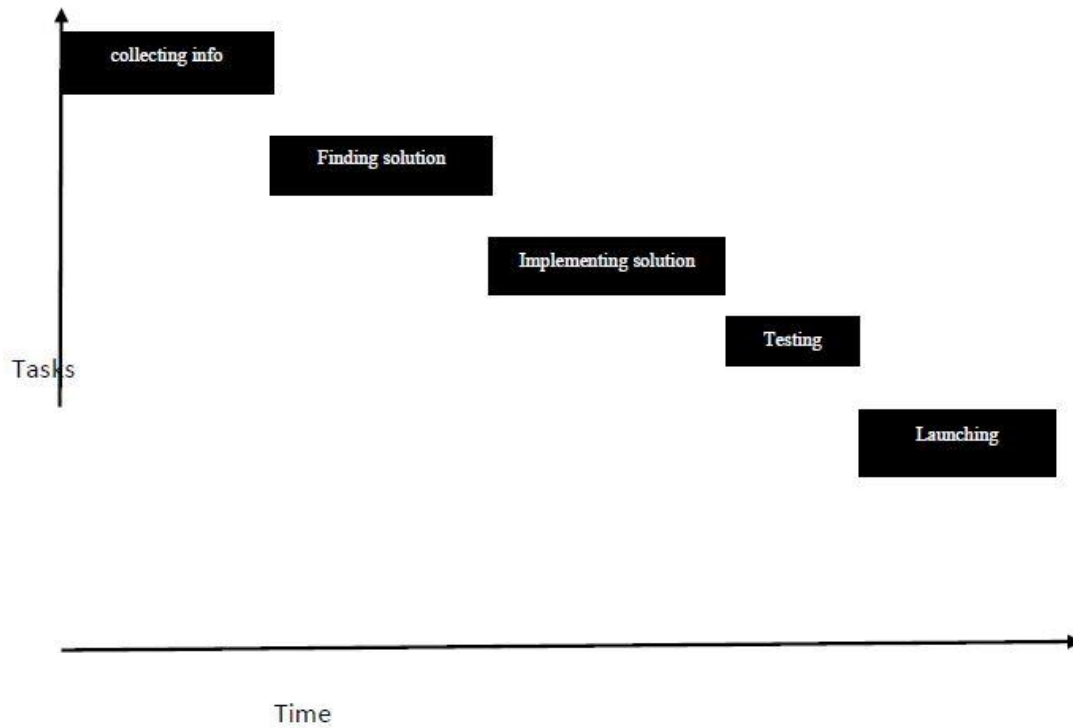
In this whole procedure we will first get to know the problems which are occurring and then think a solution which can easily solve the problem then implement this solution and then test it and take reviews of it and then finally launch it.

### **1.7.2. Roles & Responsibility Matrix**

All three members of the group are playing a huge role in that project from collecting information to implementing our project we all are performing equivalent roles.

case of responsibilities we all have divided it and working collectively to made our project as good as can be possible.

### 1.7.3. Gantt Chart



### Report Outline:

As we have seen and experienced that people face a lot of problems while going to buy the medicines and now a day most people hesitate to go outside because of covid. So they can order medicines online and can see the related things.

# Chapter 2

## **Software Requirement Specifications**

## Chapter 2: Software Requirement Specifications

### 2.1. Introduction

#### 2.1.1. Purpose

There are many existing solutions in market but after deeply watching them we come to know many of them are scamming people by charging more and by not delivering exact service which they promise also they have problems in delivering on time. So, we want to come over them to make our place.

#### 2.1.2. Document Conventions

Right now, it's a web-based application but we are willing to come on all plate forms. An application that can help you in getting your medicines online on your doorstep in reasonable prices. You can order and can see same genera medicines and can talk to the support system for simple problems.

#### 2.1.3. Intended Audience and Reading Suggestions

Right now, you have to go to pharmacy to purchase medicine or you can buy online which come with some complexity you can buy only given quantity or you have to get your medicine in 3 to 4 days like you are not be able to get earlier then that so we will tackle these problems. We also make our interface user friendly.

#### 2.1.4. Product Scope

This project is highly volatile as this is need of the hour and we want to give best services about medicines because everyone needs medicines right now in their homes instead of going out and get for their selves. They want in their houses because of COVID-19 situation and people avoid going out.

### **3.1.5. References**

#### **Research questions:**

As this study will attempt to understand the success or failure of building this system and also understand the factors that contributed to the acceptance of this, following research questions are developed:

- How does cost affect the development of this system?
- How can we make the system better?

## **2.2. Overall Description**

### **2.2.1. Product Perspective**

Apki Dawai is a web-based application which will provide medicines on your door step. You can pay with online or with offline methods. Customer can view or buy medicines by following easy steps. We are willing to add live chat and other features and different payment methods. We want to insure on time delivery and we are willing to add more features.

### **2.2.2. Product Functions**

We want to give fast delivery and on time. You can order your desire quantity of medicine with any interruption. You can consult about your medicine on live chat or can ask for any medicine of same genera. You can also see related medicines to your desire medicine or you can search medicine according to your problem. You have to login for ordering medicine. There is also customer and admin dashboard.

### 2.2.3. User Classes and Characteristics

There are 4 user classes in this project:

1. Administration
2. General Public
3. Customers
4. Adviser

- Administration can add, edit or delete info and can provide services to the customer.
- General public can use this system to see the details available on website. General publics need to login to use the system.
- Customers can provide feedbacks for service.
- Adviser will give advice.

### 2.2.4. Operating Environment

You can run website on any browser and can perform functionality.

## 2.3. External Interface Requirements

### 2.3.1. User Interfaces

We make the user interface as simple as we can because it is very important for a software. We will use efficient icons to make it understandable for everyone because every user of application may be educated may be not so it's important to do that. Customer or administrator will login first with his account. Customer can see availability of medicines and can purchase. Administrator can get an interface of add, remove or can edit medicines.

### 2.3.2. Hardware Interfaces

Hardware requirements for insurance on internet will be same for both the parties which are follows:

1. Processor: - Pentium-1 or above
2. RAM: - 128 MB or above

### Software Interfaces

Software required to make working of product is:

1. operating system: windows xp/vista/7 or later versions Linux OS which can support networking

### Communications Interfaces

User can connect with system using browser and internet one user login can easily use the system. User can communicate by email or using number.

### System Features

You need to login in the system to use the system. When you login in the system it can give you access to more features like feedback and payment options. You can manage and check your orders if you are in management and can purchase medicine if you are a customer. Management can add or remove medicines from the list. Customer can payment online or offline. Further feature can be added with time.

### Description and Priority

Priority feature of the system is to give get customer satisfaction. Main feature is to provide best service and high-quality satisfaction to customers. The main thing is to give preference to the customer. Payment options is also a priority feature as it is very important for customer satisfaction.

### Stimulus/Response Sequences

**Stimulus:** User requests to create a new account.

**Response:** System provides a form for the user to enter the information. After that account will be created.

**Stimulus:** Customer check available medicines.

**Response:** System provide information and price.

**Stimulus:** User will pay his bill and data will enter to system.

**Response:** User's selected medicine will be booked for him.

**Stimulus:** User can give feedback.

**Response:** System see the feedback and take any action if required.

### **Functional Requirements**

- The system shall allow the user to create a new account.
- The system shall allow the customer to see available medicines.
- The system shall allow the management to add or remove medicines.
- The system shall allow the user to pay his bill with given options.
- The system shall allow the user to give feedback service.
- Keeping records of registration of customers.
- Keeping the records of sold and available medicines.
- Storing the feedback given by the customers.

#### **i. System Feature 3 (and so on)**

### **b. Other Nonfunctional Requirements**

#### **Performance Requirements**

In the performance requirements many requirements come which are given below;

##### **i. EFFICIENCY REQUIREMENT**

System should be accurate and efficient for both management and customer.

##### **ii. RELIABILITY REQUIREMENT**

The system should provide a reliable environment to both customers and owner and also, they feel safe while using the system.

##### **iii. USABILITY REQUIREMENT**

System should be user friendly and can be used on device having network connection.

#### **iv. IMPLEMENTATION REQUIREMENT**

Implementation of the system using CSS and html in front end with jsp as back end and it will be used for database connectivity. And the database part is developed by MySQL. Responsive web designing is used for making the website compatible for any type of screen.

#### **Safety Requirements**

In the safety requirements many requirements are important which are given below;

- Customer data will be secured.
- Customer information is not given to any other person.
- Administration's personal info will be secured.

#### **Security Requirements**

System should be safe for admin and customer and there all details should be secured. Customer and admins personal data should be priority.

#### **Software Quality Attributes**

Website should be:

- Secured
- Safe for both customer and admin.
- System should not hang.
- System should respond to customer and admin very speedily.
- Strong management system.
- System should be reliable.

## **Business Rules**

This system has some important rules;

- Speedily response should be given to customer.
- Make sure that customer details should not be leaked.
- Usability of the system should be very easy.
- An easy access to system should be given.
- Everyone will easily use the system.

## **Other Requirements**

A user must login with his username and password to the system after registration. If they are invalid, the user not allowed to enter the system. A new user will have to register in the system by providing essential details in order to view the info in the system. The administrator can add user, delete user, view user and block user. The administrator can add moderator, delete moderator and block moderator. The administrator can add, delete and view details present in the system. The administrator can view the orders.

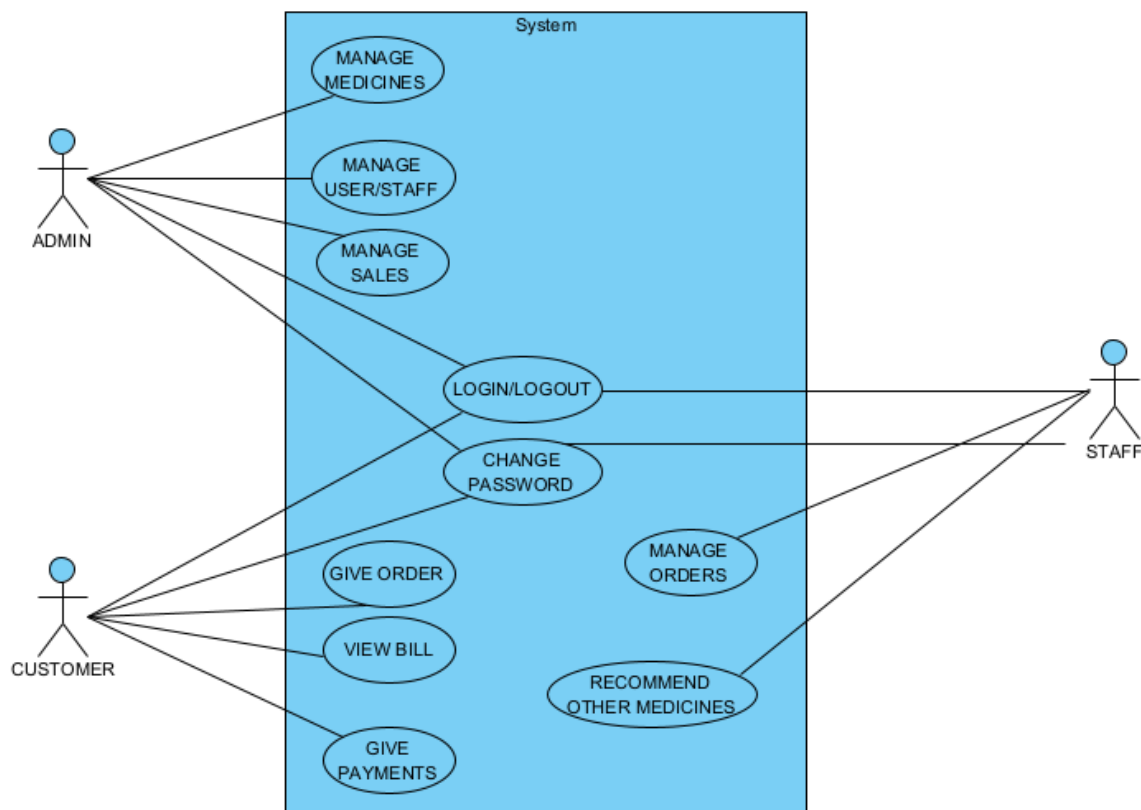
# Chapter 3

## Use Case Analysis

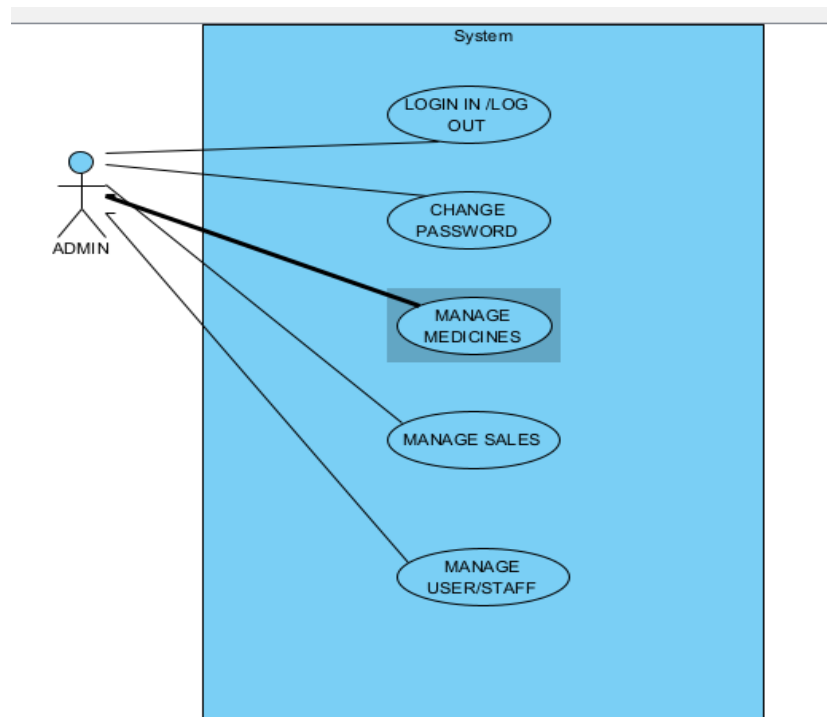
## Chapter 3: System Analysis

In this chapter we are going to analyze our whole system. This includes how our system is working and what are requirements which is required and what type of output it will give to us. All of these aspects are shown with the help of diagrams which called the use case of any system. In this we will show which stake holder can access which of the functions.

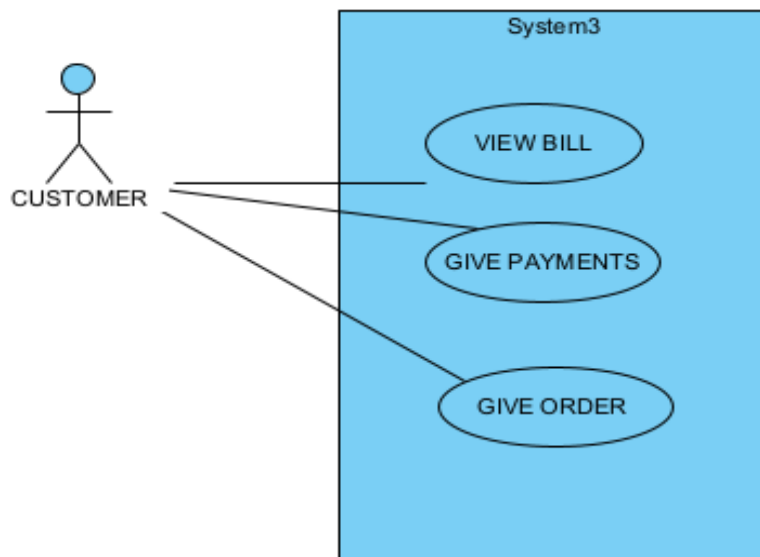
### 3.1. Use Case Model



**Use cases individually;  
FOR ADMIN;**



**FOR CUSTOMER;**



### 3.2. Use cases individually Use Case Descriptions:

#### User Login:

<b>Name</b>	User Login		
<b>Actors</b>	Admin, User		
<b>Summary</b>	The user will enter their login and password credentials for verification and after verifying the system will let the user in the system.		
<b>Pre-Conditions</b>	The user record should already be present in the database. Currently the specific user is not logged in.		
<b>Post-Conditions</b>	The user will be directed to the home page and will start a new session.		
<b>Special Requirements</b>	None		
<b>Basic Flow</b>			
<b>Actor Action</b>		<b>System Response</b>	
1	The user opens the login page.	2	The login page is displayed asking for email and password.
3	The user enters valid email and password.	4	The system verifies the email and password, establishes a session for the user and redirects the user to the home page.
<b>Alternative Flow</b>			
3	The user enters invalid email or password.	4-A	The system responds with an error <b>message</b> : Incorrect email or password entered.

#### User Sign Up with Email:

<b>Name</b>	User Signup
<b>Actors</b>	User
<b>Summary</b>	The user will enter their user's name which should be unique and a password which should be secure enough for the user that it cannot be hacked or retrieved.

<b>Pre-Conditions</b>	User has to not be already a registered as an active user.		
<b>Post-Conditions</b>	The user will be directed to the select interest screen to select topics that he is interested in.		
<b>Special Requirements</b>	None		
<b>Basic Flow</b>			
<b>Actor Action</b>		<b>System Response</b>	
1	Sign up page is accessed by the user.	2	The sign-up page will require proper credentials to create an account.
3	The user provides unique email and a password.	4	System records the email and password in database, launches a new session and takes the control to the main page.
<b>Alternative Flow</b>			
3	The user types already registered or invalid email.	4-A	The system will give an error message: Invalid email id typed.
5	The user leaves any of the two or both fields blank.	6-A	The system sends an error message: Field cannot be empty.

**SEARCH AND GIVE ORDER:**

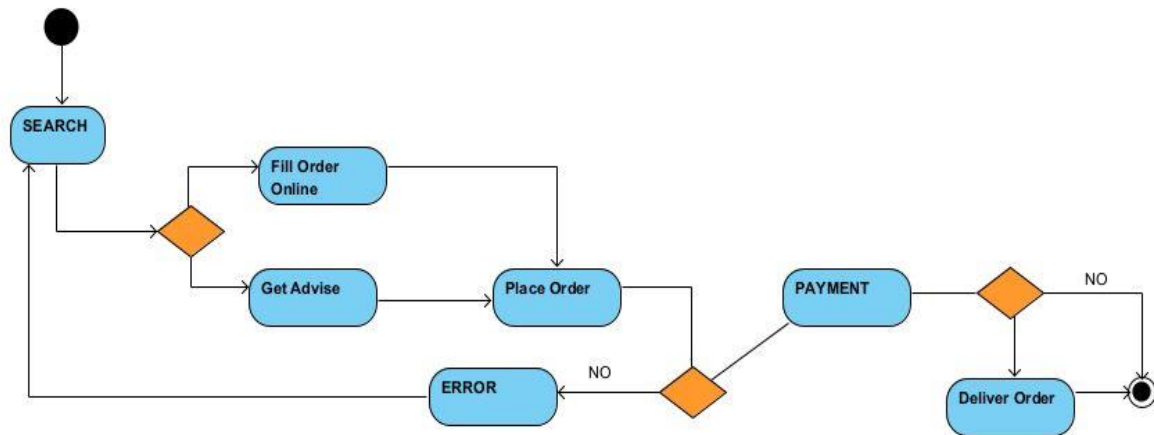
<b>Name</b>	Search and give order		
<b>Actors</b>	User		
<b>Summary</b>	The user will select the MEDICINE from the system.		
<b>Pre-Conditions</b>	Records have the user registered and that certain user is already logged in the system.		
<b>Post-Conditions</b>	System will give results for the selected product.		
<b>Special Requirements</b>	None		
<b>Basic Flow</b>			
<b>Actor Action</b>		<b>System Response</b>	
1	User click on select product from device	2	System will open window to select product from device.
3	The User click the result button	4	System will give result whether for selected product.

# Chapter 4

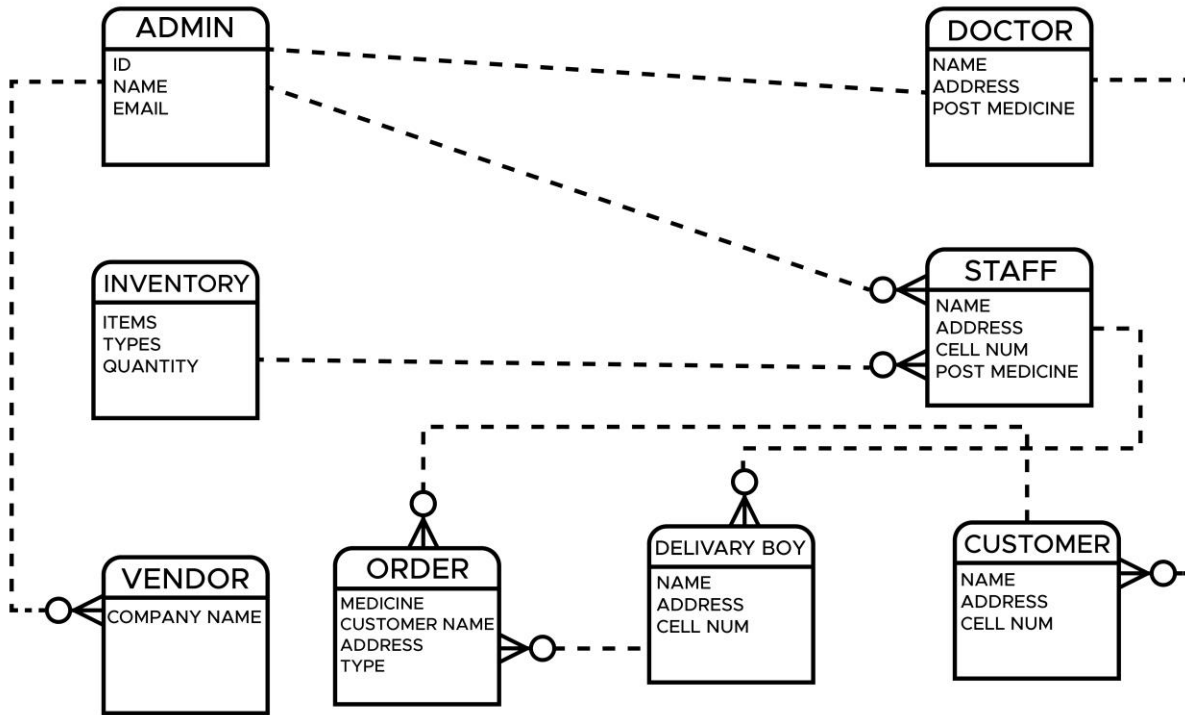
## System Design

## Chapter 4: System Design

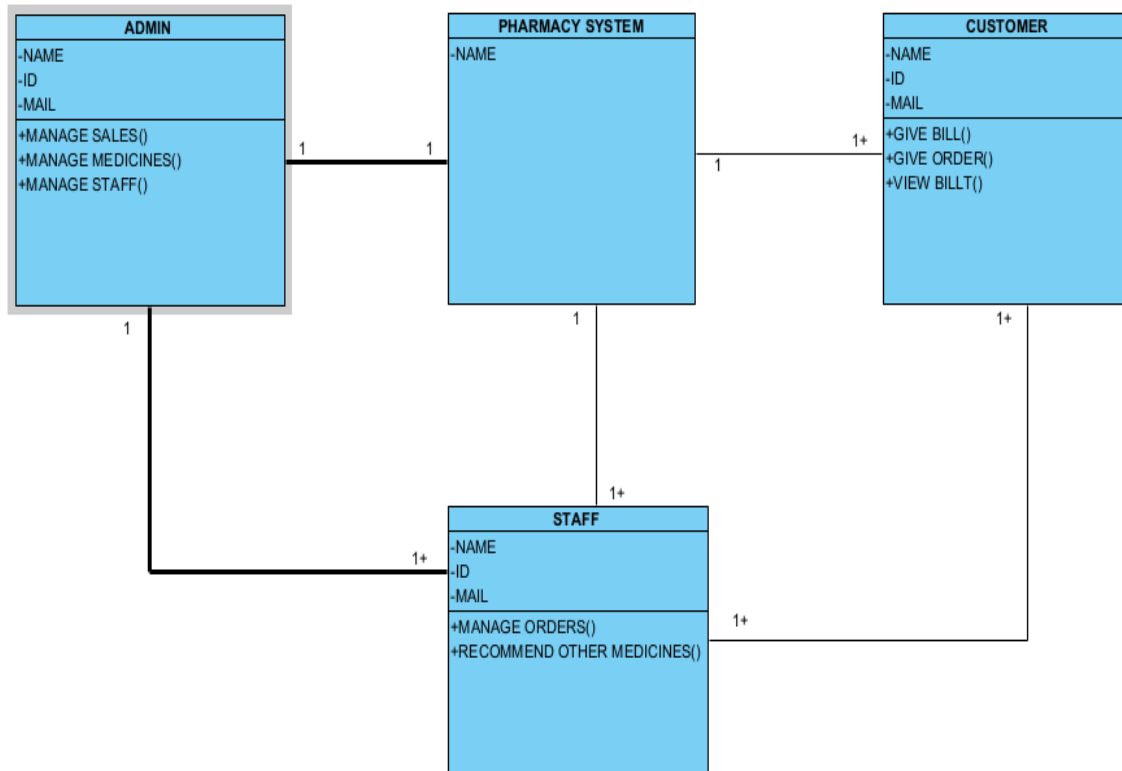
### 4.1. Architecture Diagram



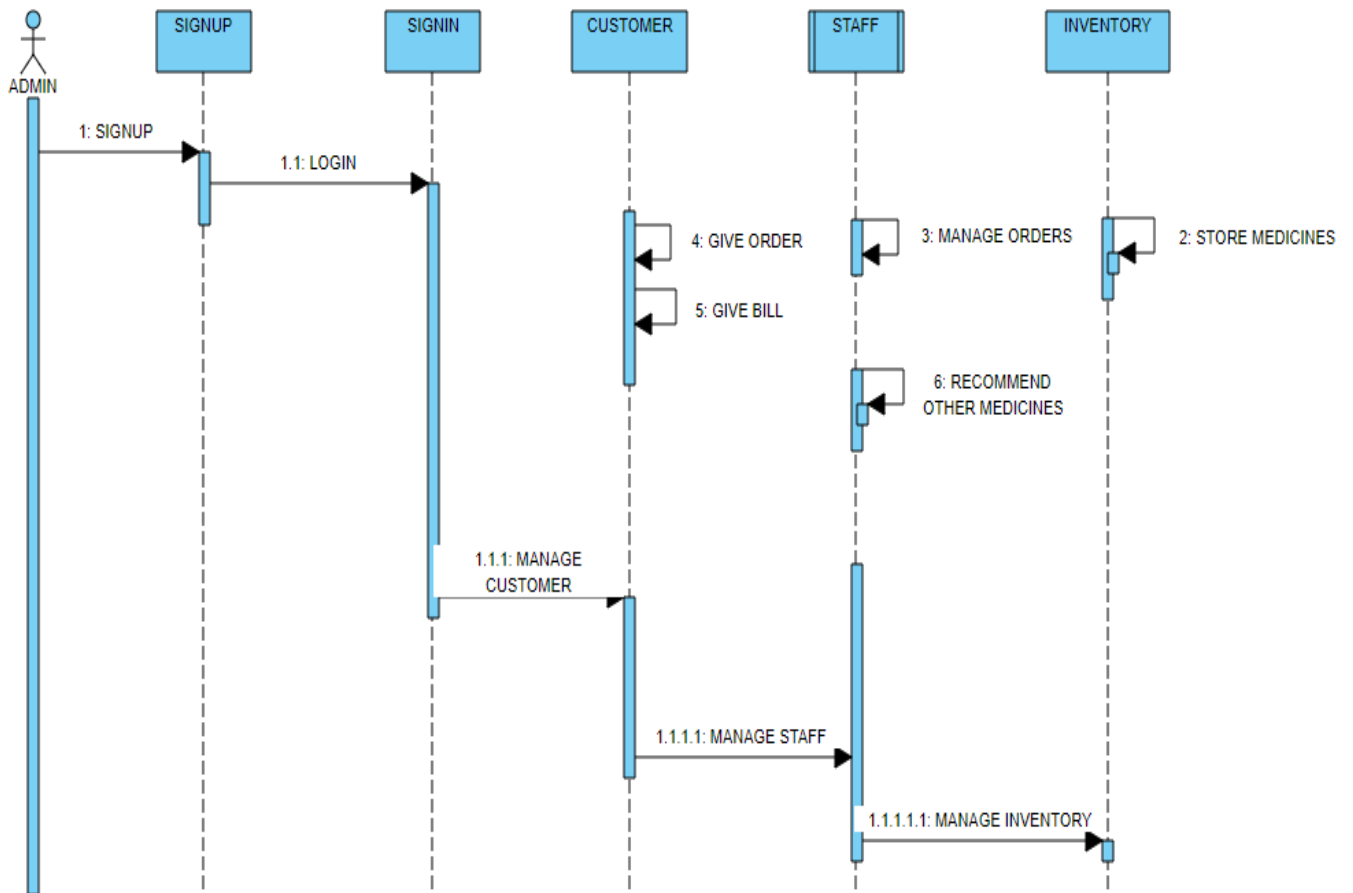
## 4.2. Entity Relationship Diagram with data dictionary



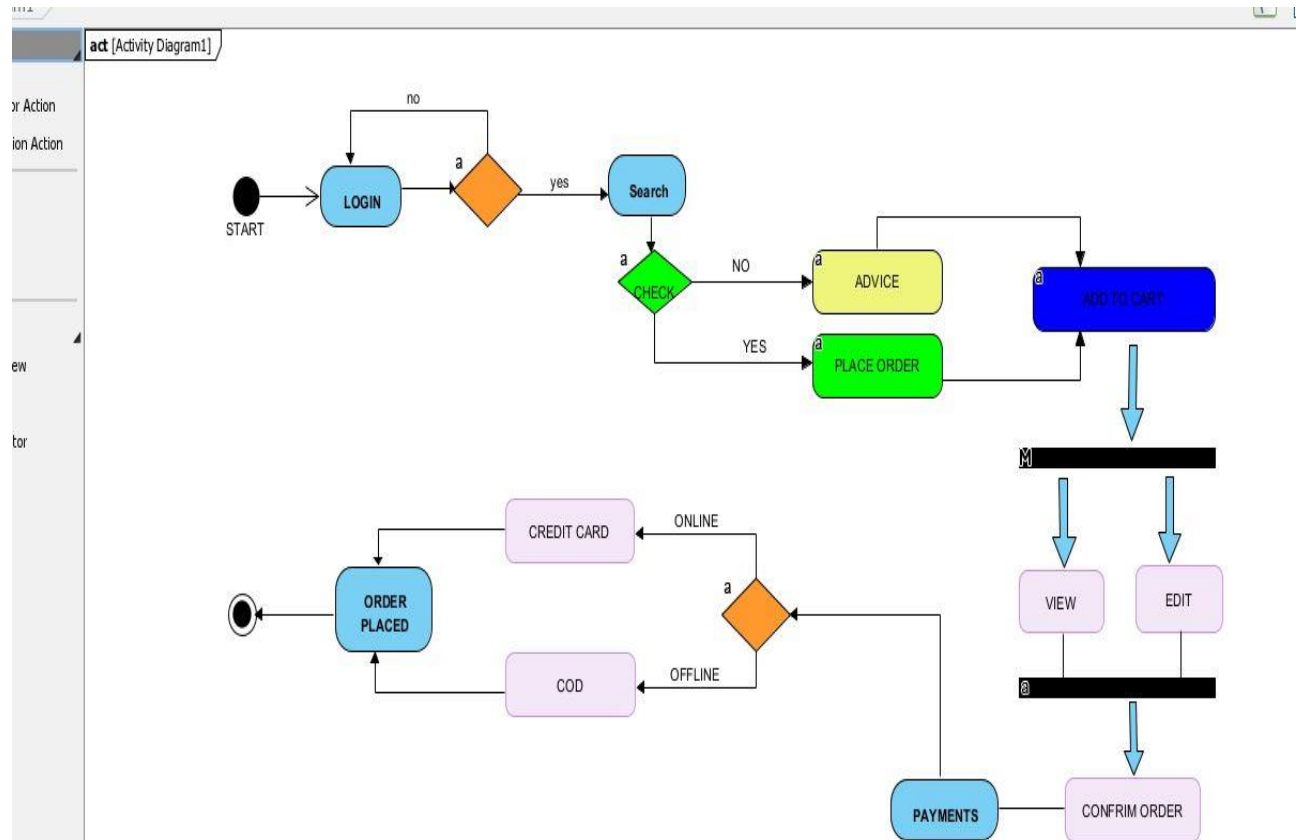
### 4.3. Class Diagram



## 4.4. Sequence / Collaboration Diagram

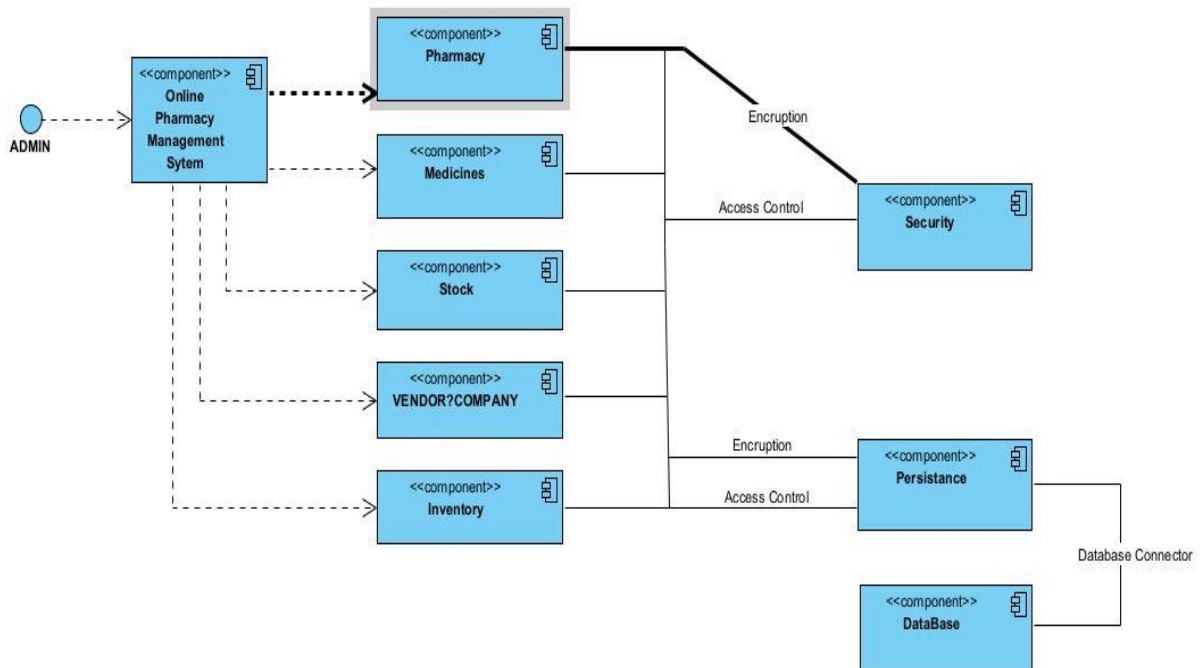


## 4.5. Activity Diagram



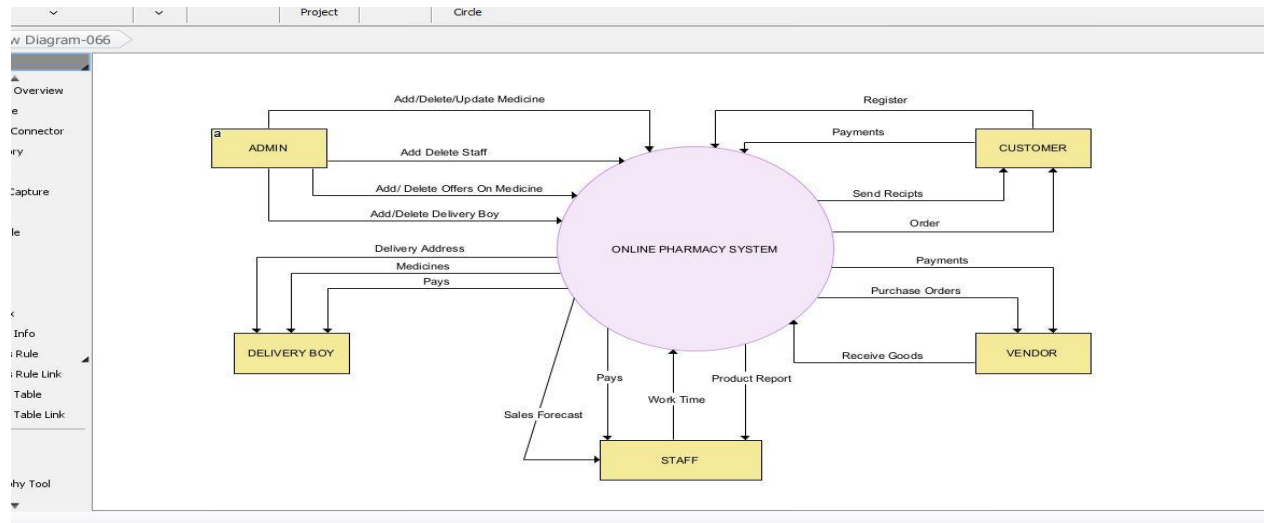


## 4.7. Component Diagram

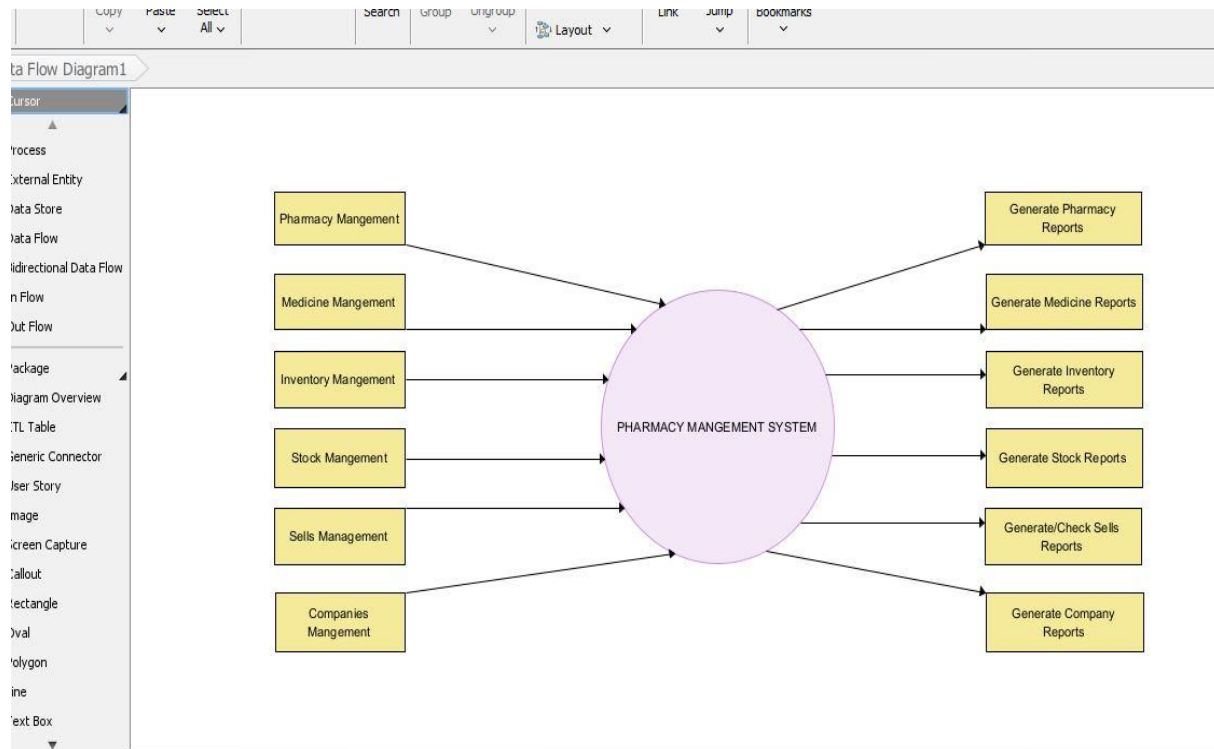


## 4.8. Data Flow diagram [only if structured approach is used - Level 0 and 1]

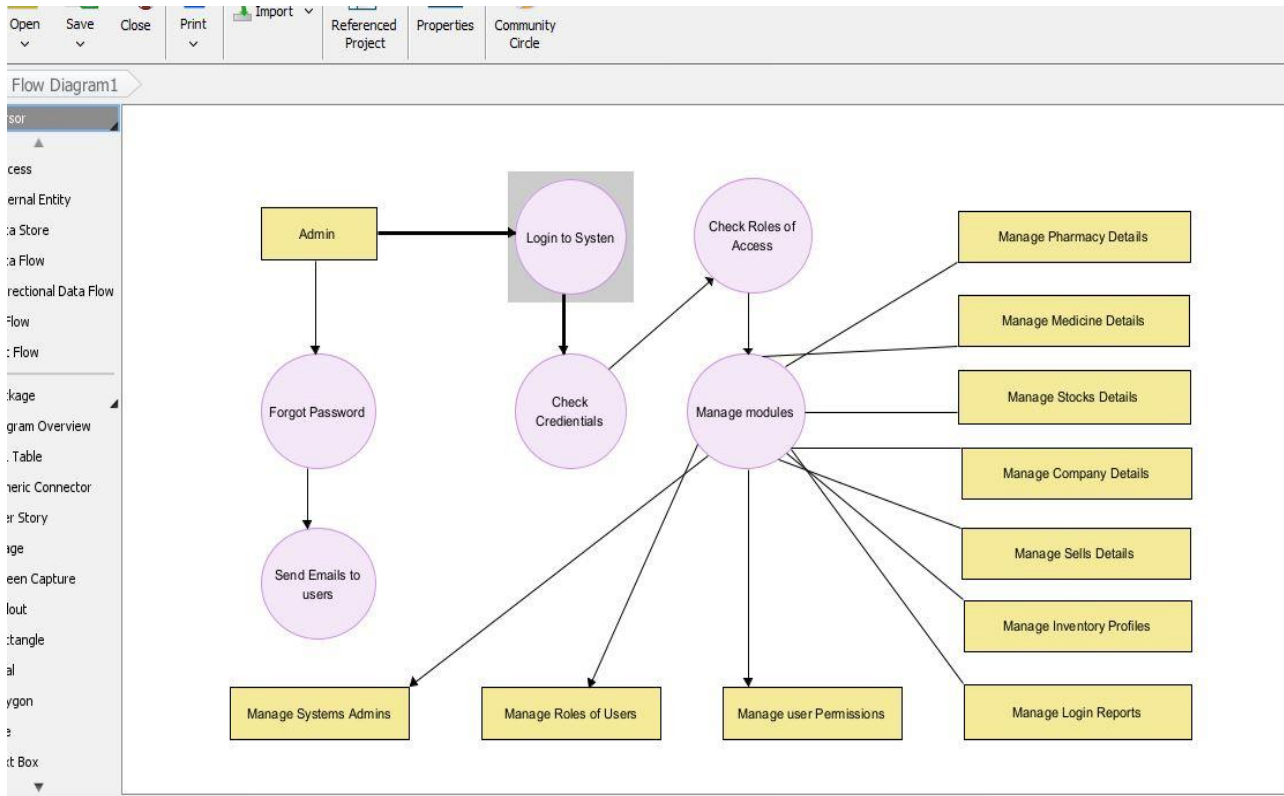
### Level 0:



### Level 1:



## Level 2:



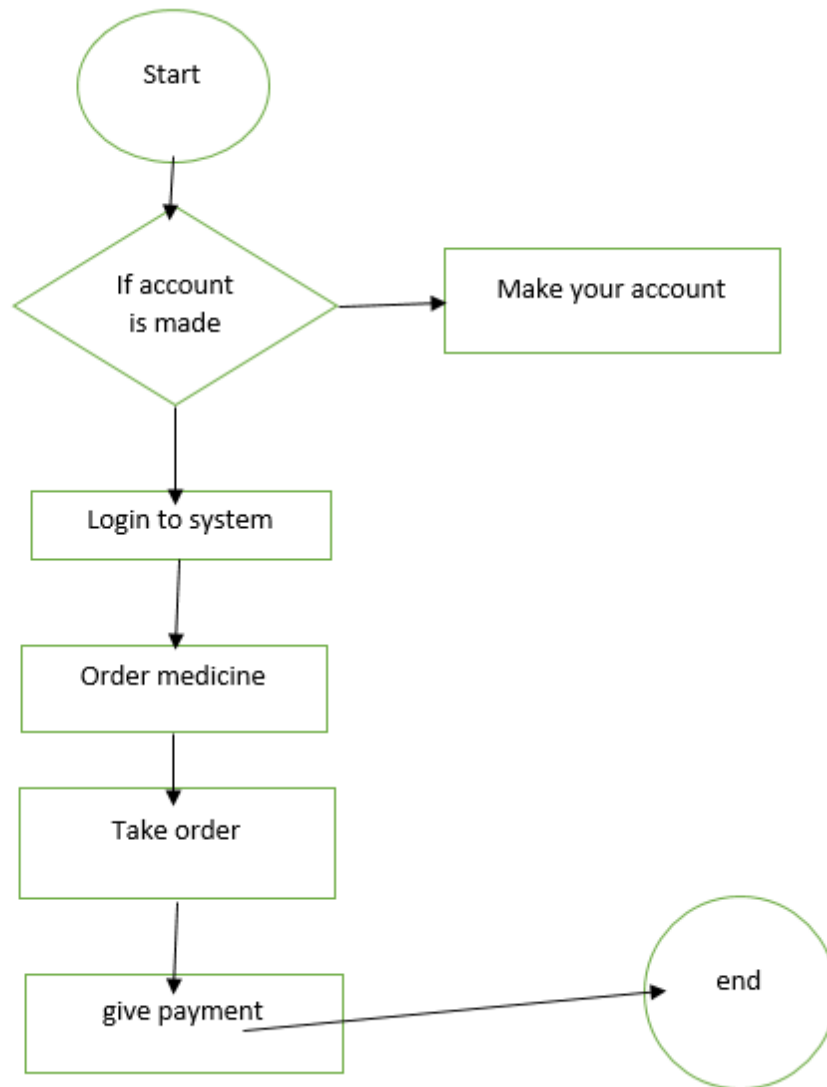
# Chapter 5

## Implementation

## **Chapter 5: Implementation**

Implementation environment, we will use Bootstrap, html, Css and the software used is Notepad ++ and also WordPress. This is a development phase and we develop and test our application here. All the important components about our project, deployment environment, tools and techniques used in making this system, coding standards and precautions have discussed in this phase. All details about version control have also briefly explained.

## Important Flow Control/Pseudo codes



## Pseudo Code:

start

Customer login in to system

Customer placed order which medicine he want

Staff provide order to customer

Customer give payment

exit

### 5.1. Components;

- Admin can login and change password and take look to inventory and manage medicines users staff and sells.
- Customer can login and change password and also make order take medicine and give payment.
- Vendor also login and change password and provide medicines.
- Delivery guy deliver medicines.
- Staff also login change password and also look to inventory and give medicines to delivery guy give advice and also recommend.

### 5.2. Deployment Environment

Deployment environment means an environment in which any software deploys and executed. Now a simple question comes into our mind, why we use deployment environment. The goal is to “Making a website available to end users”. It means when user use any app and write any website it fully worked correctly. So, in case of online pharmacy system, we can use pc and mostly smartphone as a deployment environment.

### 5.3. Tools and Techniques

The tools and technique used to create Grocers application are:

- WordPress
- Notepad ++.

We can also use HTML , CSS , Bootstrap , JAVASCRIPT JAVA, MYSQL.

It uses techniques for its improvement, for example,

- User friendly
- Feedback
- Improvements and bug fixes.
- Introduces new versions and updates.

## 5.4. Best Practices / Coding Standards

These techniques will help to achieve best practices.

- User friendly
- Feedback
- Improvements and bug fixes.
- Introduces new versions and updates.

in case of coding standards, it depends on its development.

## 5.1. Version Control

- Version control is a method of tracking changes to documents and files to always know which version is the current iteration. By using project management with version control, or version management, you can efficiently track and control changes to these documents directly within your website.
- This is the first version of our project. The version is 1.0.1.

# Chapter 6

## Testing and Evaluation

## Chapter 6: Testing and Evaluation

This Chapter is all about testing and different phases of testing. Testing tells us about performance and main parameters of the project and flow of data in a regular manner.

### 6.1. Use Case Testing

- Use case testing is a technique that helps to identify test cases that cover the entire system, on a transaction-by-transaction basis, from start to finish.
- It is a description of a particular use of the system by a user. It is used widely in developing tests or systems for acceptable levels.

### 6.2. Equivalence partitioning

- In this technique, the data fed into the software to be tested is divided into partitions of equal sizes.
- From each partition of data, one test case is needed. The different test cases must test the classes of the software continuously.

### 6.3. Boundary value analysis

- Boundary value analysis is another black box test design technique and it is used to find the errors at boundaries of input domain rather than finding those errors in the center of input.
- Suppose, a printer has to make and deliver printed copies ranging from 1 to 150. So, to apply boundary value testing, the analysis is done on the boundaries, taking the extreme ends. The maximum value is 150 and the minimum value is 1. The invalid values in this test case will be 0 and 151.

## 6.4. Data flow testing

- Data flow testing is a white-box testing technique that examines the data flow with respect to the variables used in the code.
- It examines the initialization of variables and checks their values at each instance.

## 6.5. Unit testing

- Unit testing is testing the smallest testable unit of an application.
- It is done during the coding phase by the developers.
- To perform unit testing, a developer writes a piece of code (unit tests) to verify the code to be tested (unit) is correct.
- We have performed Unit testing for every module for better performance.

## 6.6. Integration testing

- This type of testing follows the natural control flow hierarchy, i.e., top to bottom.
- First, we will detect face and then shows the detection of mask,
- After that we can also detect image by uploading whether a mask is present in the picture or not.

## 6.7. Performance testing

- Check the maximum number of users that the application can handle before it crashes.
- This is not about finding software bugs or defects.
- Different performance testing types measures according to benchmarks and standards.

## 6.8. Stress Testing

- Stress testing is the process of determining the ability of a computer, network, program or device to maintain a certain level of effectiveness under unfavorable conditions.
- The process can involve quantitative tests done in a lab, such as measuring the frequency of errors or system crashes.

# Chapter 7

## Summary, Conclusion and Future Enhancements

## **7.1. Project Summary**

Our project is in continuous state of progress as of now we have gone through various research papers related to our topic. We have finalized our deep learning models and datasets for our project. We'll be using different medicines brands to get medicines details and also use php java script firebase and sublime xamp visual code.

## **7.2. Achievements and Improvements**

On the other hand, for breath monitoring very less work is done and accuracies as of now are just ok. A prototype related to our client server website is also created which depicts how our model will actually look like. For face mask detection we had to keep in view that multiple faces could be detected and along with if someone is covering his/her face with hands it should all be differentiated and provided output must be from no mask class. There is always a room for improvement so if during this time interval we find any better technique we'll surely implement it.

## **7.3. Critical Review**

There were many challenges which were faced as in searching of products because we are not aware about medicines a lot.it is also very difficult to find brands who have medicine of different kinds. Nowadays doctors do not share their experience easily it is also a factor.

## **7.4. Future Enhancements/Recommendations**

Moreover, we are developing this project keeping the big picture in mind that how in future these types of projects could be deployed in our society. Also, we'll be adding an alert notification for our application which would basically send an email to user. This aspect will also be added keeping in view that if ever this model is deployed on higher level like in markets etc. then authorities must be made aware about someone who needs medicines and advice. This project will help for people who want delivery in their houses.

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