



ONLINE PRESCRIPTION POINT

Software Requirement Specification



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1. Introduction

1.1 Purpose

The system serves as an online platform to order medicines and collect them easily at customer's convenience. It will help patients get their necessary medicines comfortably and reduce hassle. The patients do not need to worry about prescriptions or medicines. The system will send the prescription to the desired pharmacies and the customers will be able to get their medicines. It will make life easier for the patients as well as the other users of the system.

1.2 Document Conventions

The font used throughout the document is Times New Roman. Bold faced texts with font size 14 have been used to emphasize the sections. The sub-sections have been pointed up using italicized texts of size 14. Other text explanations have been done with plain text of size 12. The diagrams have been labeled using italicized texts.

1.3 Project Scope

The system addresses and helps to solve the problems faced by patients by allowing them to choose the area and the pharmacy they want to buy their required medicines. So they can choose their trusted pharmacy near their home and can collect it easily whenever they want. The prescription of a patient will be forwarded to nearest location of the patient from the doctor's chamber. When the prescription arrives at the nearest location of patient, the seller will ask the patient if he is willing to buy from him or not. If yes, then the patient can pick the medicine himself. As the prescription will be an online form so the readability will be high and patients need not to guess which medicine it is. The pharmacies can also notify the system if the medicine is not available so the patient can choose another pharmacy. If any medicine is not available in the market, then the doctors can prescribe some alternatives. Also, it will help poor patients as they would not have to buy medicines at a higher price from hospitals. Furthermore, the system will also help in eradicating the practice of selling and purchasing medicines without the doctor's approval. So, the system brings the medicines to the patients' doorsteps which will be immensely helpful for them.

1.4 References

1. Software Requirements, Third Edition, by Karl E. Wiegers, ISBN: 978-0-7356-7966-5, Microsoft Press © 2013

2. <http://www.vceit.com/p/SRS-sample.htm>
3. <https://krazytech.com/projects/sample-software-requirements-specificationsrs-report-airline-database>

2. Overall Description

2.1 Productive Perspective

Medicines play an important role in our life as they help us to stay healthy and at times, save lives. Getting the right medicine at the right time can make the difference between life and death. So, it needs no exaggeration about the significance of these. But sometimes it is hard to find the right medicines due to lack of availability. Again, sophisticated hospitals often sell them at a higher rate which makes it difficult for people to buy. Lack of trust at an unknown pharmacy adds to the problem. Also, sometimes the prescription written by a doctor can be hard to read for a patient. In these circumstances, patients need to guess. Often there are long queues in the medicine shops which are very time consuming. Moreover, there is a practice of selling, buying and having medicines without the doctor's approval or prescription which can cause harm to our health. All these problems can be addressed if the patients can buy their necessary medicines from their convenient pharmacies.

2.2 User Classes and Characteristics

Basically the system has four types of users.

2.2.1 Patients

The patients can choose the pharmacy they want to collect their required medicines

2.2.2 Doctors

Doctors can create, edit and delete accounts. They can also create patient profiles and helps to choose the pharmacy where the patients can collect the medicines from. They can get notified by the pharmacies if the medicine is not available or if any medicine is out of market.

2.2.3 Pharmacy

The pharmacies can create, edit and delete their accounts. They will receive user profiles and prescriptions from the doctors through which they can sell the

medicines to the patients. They can inform the doctor if any medicine is unavailable or out of market.

2.2.4 Admin

Admin can verify, modify or delete pharmacies and doctors profiles. They are responsible for the overall management of the system.

2.3 Operating Environment

Centralized database
System- Client/server system
Operating system- Windows
Database- MySQL database
Platform- vb.net/Java/PHP

2.4 Design and Implementation Constraints

It is anticipated that all related governing directives both social and governmental regulations will be adhered to. Encryption will be employed to keep health information secure.

Implement the database at least using a centralized database management system.

The Internet connection is also a constraint for the application. Since the application fetches data from the database over the Internet, it is crucial that there is an Internet connection for the application to function.

Due to the large nature of the project, keeping track of the source code between the developer sub-teams will be difficult. We plan to implement a subversion/source control system, most likely GitHub, where we will pull/push code commits to/from the GitHub server. The source code, as well as the current folder/file structure, will be able to be uploaded and fetched from our GitHub account. Once completed, the software will be continuously updated by the developers.

3. System Features

3.1 Description of feature

3.1.1 Registration to the system

Doctors and pharmacy can register to the system by themselves. An email will be sent by the system for activating the account. Patient's registration will be done by the doctor while visiting. An email will be send to patient with his/her information and the prescription.

3.1.2 Select pharmacy for Medicine (Patient)

Doctors will prescribe medicine for a patient with the information's and will merge new prescription in future without giving the information's again and again.

3.1.3 Select pharmacy for Medicine (Patient)

A patient can select pharmacy by themselves as well as system will be automatically send the prescription to the nearest location of patient's.

3.1.4 Notifications

3.1.4.1 The admin will receive notification after a registration form doctor/pharmacy for cross check the information and verification.

3.1.4.2 The pharmacy will receive notification based on location form the system when doctor submit a prescription.

3.1.4.3 Doctors will receive notification by the pharmacies if the medicine is not available or if any medicine is out of market.

3.1.5 Edit or Delete account

3.1.5.1 Doctor or pharmacy can edit/delete account by themselves or request to admin for it. For delete an account at least two admins approval is needed with valid proof of reasons for deleting.

3.1.5.2 For Edit/delete a patient account, Patient will request to admin for these activities.

3.1.6 Review/Complain

Patient can review/complain any doctor/pharmacy for their service. Based on these, actions will be taken.

3.2 User Requirement

3.2.1 As a User, I want to register to the system so that I can login to the system.

3.2.2 As a Doctor, I want to prescribe medicine for the patient.

3.2.3 As a Doctor, I want to prescribe medicine for an existing patient without create new patient account.

3.2.4 As a Pharmacy, I want to receive notifications for the new prescription from the system so that I can able to see prescription based on my location.

3.2.5 As a Doctor, I want to receive notifications from the system for medicine change request so that I can give alternative medicine for the patient.

3.2.6 As an Admin, I want to receive notifications from the system for new registration so that I can cross check the information validity.

3.2.7 As a User, I want to edit my information so that I can update my new information to the system to keep me updated.

3.2.8 As a Patient, I want to request an admin to edit my information so that I can update my new information to the system to keep me updated.

3.2.9 As a Patient, I want to give feedback/review to the system so that I can share my experience with the system or other users.

3.2.10: As a User, I want to request an admin for deleting so that the system delete my account.

3.2.11: As an Admin, I want to delete any account based on request or breaking any policies so that they cannot use the system.

3.3 Functional Requirements

3.3.1 Enter the site

FR-1: For using the system, the users should register to the system.

FR-2: The patient account should be created while the prescription is written by a doctor.

3.3.2: Notifications

FR-3: The system should send notification to the pharmacies for new prescription based on location.

FR-4: The system should send only patients medicine information and phone number to the pharmacies.

FR-5: The system should send notification to the doctor for any medicine change request.

FR-6: The system should notify to the admin for verification of a new register.

3.3.3: Write Prescription

FR-7: The doctor should write prescription along with the patient's information for further use.

FR-8: The Doctor shall prescribe medicine for an existing patient without creating new patient account.

3.3.3: Edit

FR-9: The system should provide options to update their information's.

FR-10: The patient should send request to the admin to change his/her given information's.

3.3.4: Review/Feedback

FR-11: The system should provide review/feedback section for the patients.

FR-12: The review section will be shown to the other patients and admin.

FR-13: Admin shall have the control to delete any review.

3.3.5: Delete Account

FR-14: The admin should have the control to delete any other users account.

FR-15: The users shall request to admin for deleting his account.

3.4 Cross References

1. Software Requirements, Third Edition, by Karl E. Wiegers, ISBN: 978-0-7356-7966-5, Microsoft Press © 2013

2. www.lucidchart.com

3. Microsoft Word

4. <http://www.vceit.com/p/SRS-sample.htm>

4. External Interface Requirements

4.1 User Interfaces

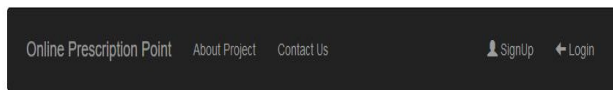
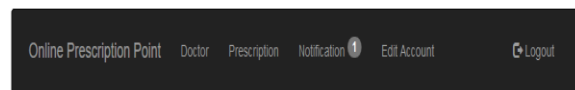


Fig-1: Landing page



Welcome Doctor	
Your hospital name:	Appollo hospital
Your Degree:	MBBS
Your Email:	doctor@gmail.com
You are a:	Doctor
Your Relationship status:	Married
Your Address:	Airport
Your gender:	Male
Your Date of birth:	09/09/1980
Your License no:	lic-0301

Fig-2: Homepage

Appollo hospital
Dr. Doctor
Email: doctor@gmail.com
Degree: MBBS

03/04/2019	Patient's email
Patient's Name	Patient's phone
Age	Male
Banani	

Problem Details

Sugessted Medicines

Save information Back to home

Fig-3: Prescription Form (Doctor view)

Appollo hospital
Dr. Doctor
Email: doctor@gmail.com
Degree: MBBS

09/03/2019	Banani
new patient	01521448961
12	Male

Medicines

1.Napa

Request For Change Medicines

Explain here which medicine need to change and why?

Request for change Back to home

Fig-4: Prescription from (Pharmacy view)

Appollo hospital

Airport

V.D. 09/03/2019

Doctor

MBBS

doctor@gmail.com

Your problems

lkj

Your medicines

1.Napa

Back

Fig-5: Prescription form (Patient view)

4.2 Software Interface

Following are the software interface will be used for this project.

Software	Description
Operating System	We have chosen windows operating system for its user-friendliness
Database	To save all the users and prescriptions information we have chosen MySQL database.
Node.JS, Bootstrap, HTML, JQuery	To implement the project we have chosen Node.JS for server side language and HTML, JQuery and Bootstrap for client side language.

4.3 Hardware Interface

- Windows
- A browser which supports HTML, JQuery and Bootstrap

4.4 Communication Interface

This project supports all types of web browsers. We are using simple electronic forms for the prescription form, change medicine request etc.

4.5 Cross References

1. <https://krazytech.com/projects/sample-software-requirements-specificationsrs-report-airline-database>

5. Quality Attribute

5.1 Usability

Description: The system shall able to detect errors in any circumstances and take log of detailed error reports and relaunch the system properly.

The system shall able to recover any incompleteness of the information while posting something.

5.1.1 Scalability

Description: The system shall have the ability to be enlarged for 100 new users weekly by increasing throughput and maximum number of simultaneous users.

5.2 Performance

5.2.1 Response time

Description: The system warrants that in supporting 10,000 users it shall ensure that performance shall not fall below the following level:

95% of all active channels for “normal” users respond in 4 seconds or less, including infrastructure, excluding back ends.

5.2.2 Workload (stress)

Description: The system shall accommodate a total of 1000 concurrent users in a busy of working hours, with an estimated average session duration of 8 minutes.

5.2.2.1 Turnaround-Time

Description: The system shall display confirmation messages to users within an average of 2 seconds and a maximum of duration 4 seconds

5.2.2.2 Throughput

Description: All database operation shall update data asynchronously for 10,000 users.

5.2.2.3 Start-up and shutdown

Description: The system shall start-up within 1-2 seconds in broadband / wireless connection, 4 seconds in 2G network connections and 2 seconds in 3G and higher network connections. If any bad things happen the system shall show proper error message shutting down with proper garbage collections.

5.3 Safety Requirements

There can be so many safety issue. The Doctor id might not real. Also the pharmacy maybe not that much trusted. So they need to verify. Pharmacy need to have ratings. If there is extensive damage to a wide portion of the database due to catastrophic failure, such as a disk crash, the recovery method restores a past copy of the database that was backed up to archival storage (typically tape) and reconstructs a more current state by reapplying or redoing the operations of committed transactions from the backed up log, up to the time of failure.

5.4 Security Requirements

Security systems need database storage just like many other applications. However, the special requirements of the security market mean that vendors must choose their database partner carefully. So that the data cant leak. Also the system should avoid the third party partners.

5.5 Others

- **AVAILABILITY:** The pharmacy should be available always whenever the doctor send the prescription.
- **CORRECTNESS:** The prescription should send to correct pharmacy as the patient need.
- **MAINTAINABILITY:** The system should preserve the patient prescription and maintain all information for farther use.
- **USABILITY:** The system should satisfy maximum number of patient needs.

5.6 Cross-References

https://krazytech.com/projects/sample-software-requirements-specificationsrs-report-airlinedatabase?fbclid=IwAR35rO5MBp3JLtNClhbyWjp0SWTKbQWOK3fRII7xBe3hKJ_uqB7OXHkv8y0

6. Data Requirements

6.1 Logical Data Models- UML Diagrams

Use Case Diagram

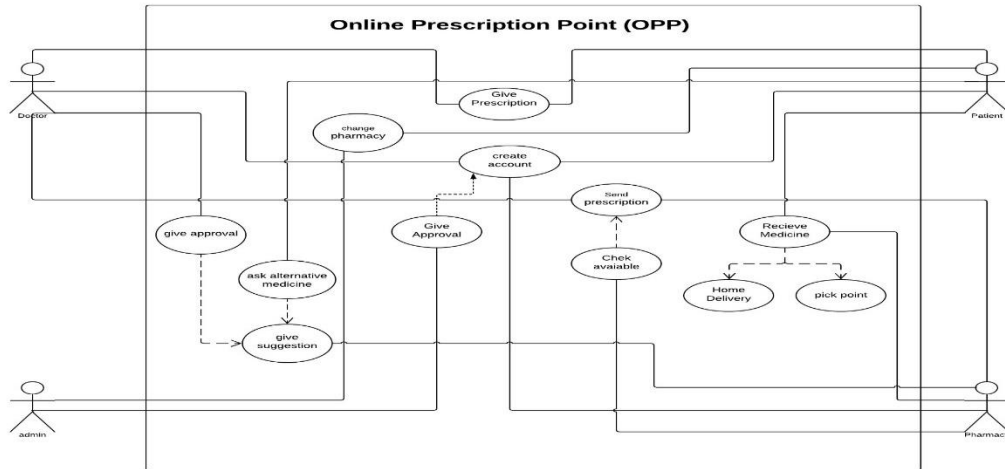


Fig: Use case Diagram

As Is Diagram-

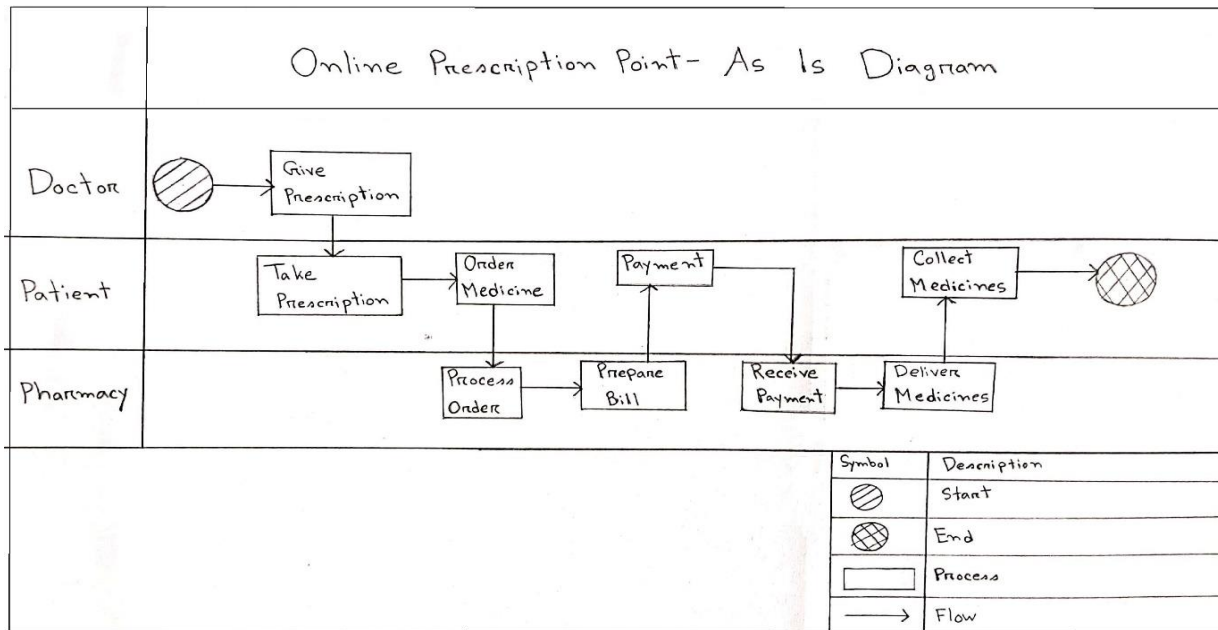


Figure- As Is Diagram

To Be Diagram-

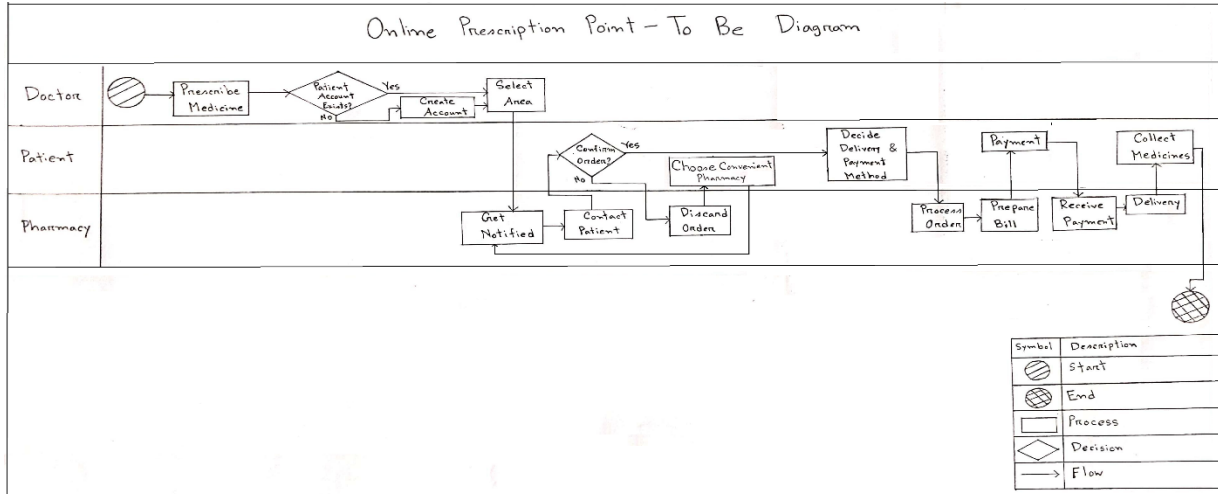


Figure- To Be Diagram

6.2 Data Dictionary

Table- prescription_info

Name	Type	Length
p_id	int	10
doctor_id	int	30
p_name	varchar	30
p_email	varchar	30
p_age	int	10
p_phone	varchar	20
p_gender	varchar	06
p_location	varchar	30
p_problem	varchar	1000
p_medicine	varchar	1000
v_date	varchar	30
r_message	varchar	1000
r-status	int	10

Table- users_info

Name	Type	Length
user_id	int	10
user_name	varchar	30
user-email	varchar	100
user_type	varchar	10
user_password	varchar	20
user_location	varchar	20
user-gender	varchar	08
user_dob	varchar	20
user_account_status	int	01

Table- additional_info

Name	Type	Length
id	int	11
user_id	int	11
user_hospital	varchar	30
user_degree	varchar	30
user_license_no	varchar	30