CONTENTS

Introduction

This report will include:

- ***Identification of Viewpoints***
  Principal Viewpoint List: Main Users
  Viewpoint Hierarchy Diagram: Schema of viewpoints according to level of interaction with the system
  Requirements of Each Viewpoints: Descriptions of the system services and constraints.

- ***Requirements Definition (considering functionality):***
  Functional requirements: Services and constraints that requires an input and returns some information of them.
  Non-functional requirements: Other form of service, like Response Time, Consistency, Reliability etc.
  Domain requirements: Rules and constraints that effects the system.

- ***Requirements Definition (considering lifetime):***
  Volatile Requirements: Requirements that are likely to change during the system development process or after the system has been become operational.
  Enduring Requirements: These are relatively stable requirements that derive from the core activity of the organization and which relate directly to the domain of the system.

- ***Fully Dressed Use Cases:*** *A table for* each use case with information of their names, goals, actors, preconditions, main scenario, exceptions and stakeholders.

The Interview: We got these information about the existing pharmacy management system from the interview we made with a pharmacist:

- Doctors use the system to add their prescriptions.
- Patients come to the Pharmacy and give their TC Identity Numbers and Prescriptions.
- In each prescription, there is a unique prescription id.
- The pharmacist enters the prescription ID.
- System displays the prescription.

- Pharmacist gives the drugs and approves the prescription.
- Prescription becomes inactive after the dealing of all drugs in the prescription is complete.
- The stock system also decrements the stock value of sold drugs.

The Observation : Observation was our second requirement gathering technique during the analysis process. In this technique, we did some searches in web and try to picture how pharmacy management systems are implemented. Later, we gathered some information to determine how those pharmacy management systems work at background. After, we documented all needed information for Pharmacy Management System by both Interviewing and Observation method, we reprocess our requirements and discuss whether there is any requirement that we should add to our list or vice versa.

Identification of Viewpoints

A) Principal Viewpoints of the System

Direct Viewpoints

- Doctor , Medical Assistant
- Pharmacist
- Maintenance Engineer
- System Administrator

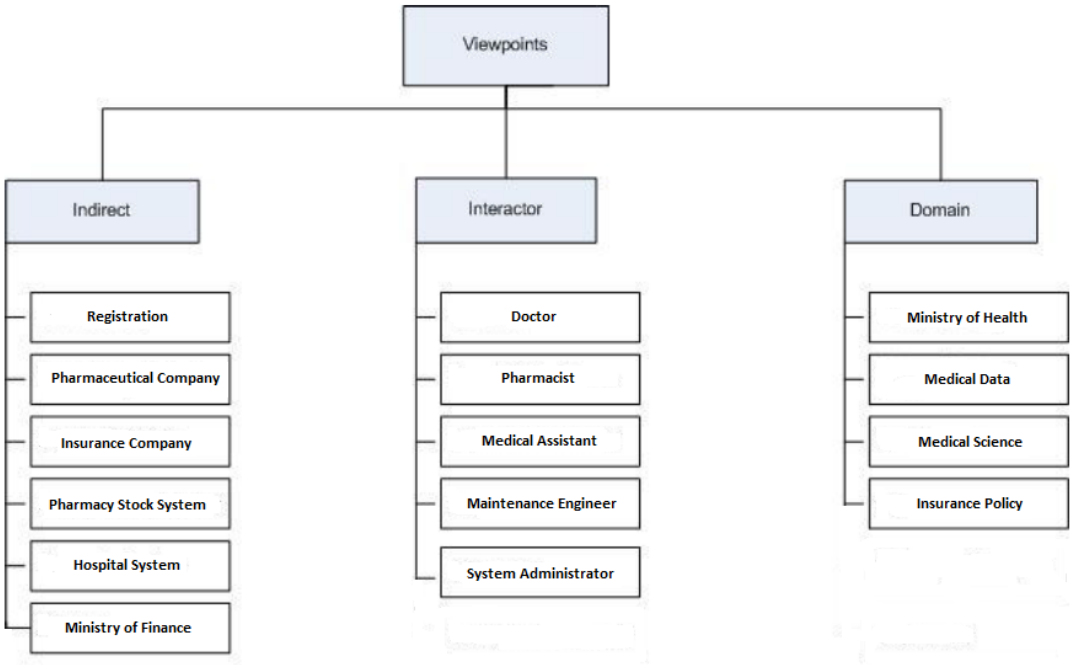
Indirect Viewpoints

- Registration
- Pharmaceutical Company
- Insurance Company
- Pharmacy Stock System
- Hospital System
- Ministry of Finance

Domain Viewpoints

- Ministry of Health
- Medical Data
- Medical Science
- Insurance Policy

Viewpoint Hierarchy Diagram



Requirements of Each Viewpoint

Direct VPs

1) Doctor :

-Add Prescription

-Update Prescription

2) Pharmacist :

-Add Medical Item

-Update Medical Item

-Stock Query

-Add Invoice Information

-Prescription Query

-Approve Prescription

-Statistics

3) Medical Assistant :

-Add Prescription

-Update Prescription

4) Maintenance Engineer :

-Maintain the system

-Optimize the system

5) System Administrator :

-Add New Pharmacy

-Add New Doctor

-Add New Medical Assistant

-Add New Maintenance Engineer

-Update Pharmacy Information

-Update Doctor Information

-Update Medical Assistant Information

-Delete Pharmacy

-Delete Doctor

-Delete Medical Assistant

-Delete Maintenance Engineer

-Restart the System

Indirect VPs

1) Registration

-Save Information

2) Ministry of Finance

-Lay of Earnings

3) Pharmaceutical Company

-Publish Statistical Information

4) Insurance Company

-Pay patients invoice

5) Pharmacy Stock System

-Decrement the stock number

6) Hospital System

-Send information to PMS

Domain VPs

1) Ministry of Health

-Determine which rules should be obeyed.

2) Medical Data

-Determine which treatment is suitable for patient's body.

3) Medical Science

-Determine which drug is better for illness.

4) Insurance Policy

-Determine insurance validation rules for patients.

Requirements Definition (considering functionality)

A) Functional Requirements:

User Functional Requirements:

-Maintenance Engineer must be able to add new users and edit their permissions.

-Pharmacist shall be able to search the prescriptions by prescription number.

-Users must have a unique ID number (11 digit) and password to use the system.

-Doctor shall be able to add prescriptions to the system. System should add the prescription a unique prescription number. (15 digit)

-Pharmacist shall be able to approve prescriptions. When pharmacist approved a prescription, it should be inactive and added to statistics.

-Searching items by name.

System Functional Requirements:

-The system shall provide appropriate viewers for a user to read prescriptions.

-System shall provide statistical information.

-System should calculate the prescription total and show.

-System must randomly generate distinct numbers to prescriptions.

-Searching medications in stock database

-System must decrement total number of item in the stock which is bought.

B) Non-Functional Requirements:

-System must be efficient, consistent, reliable.

-Documents must be able to accessed by multi-users.

-System must be easy to use.

-System must have a fast response time.

-System must be 7/24 available to use.

-System must have enough storage capability.

-User graphic interface must have high usability

-Privacy (The system shall not disclose any personal information about patients)

-Safety (The system must preserve personal information from any treats)

-Ethics

c) Domain Requirements:

-Insurance discount must be considered while preparing the prescription total.

-Pharmaceutical industry

-Ministry of Health specifies prescription expire dates

-Special drugs and Prescription types that defined by Ministry of Health (Green Prescription, Red Prescription etc.)

Requirements Definition (considering lifetime)

A) Volatile Requirements

-User permissions may change. (Must be editable by maintenance engineer.)

-Discounts that are assigned by Ministry of Health may change.

-Prescription types may change (green, red etc.)

-Changes of screen resolution

-Hardware changes (for example: If server hard drive capability comes short)

-In case of disconnection during the prescription approval operation, the system should store transaction's information and use it when reconnected.

B) Enduring Requirements

-Doctors add prescriptions

-Pharmacists view and approve prescriptions

-Stock listing ,stock decrementing

Fully Dressed Use Cases

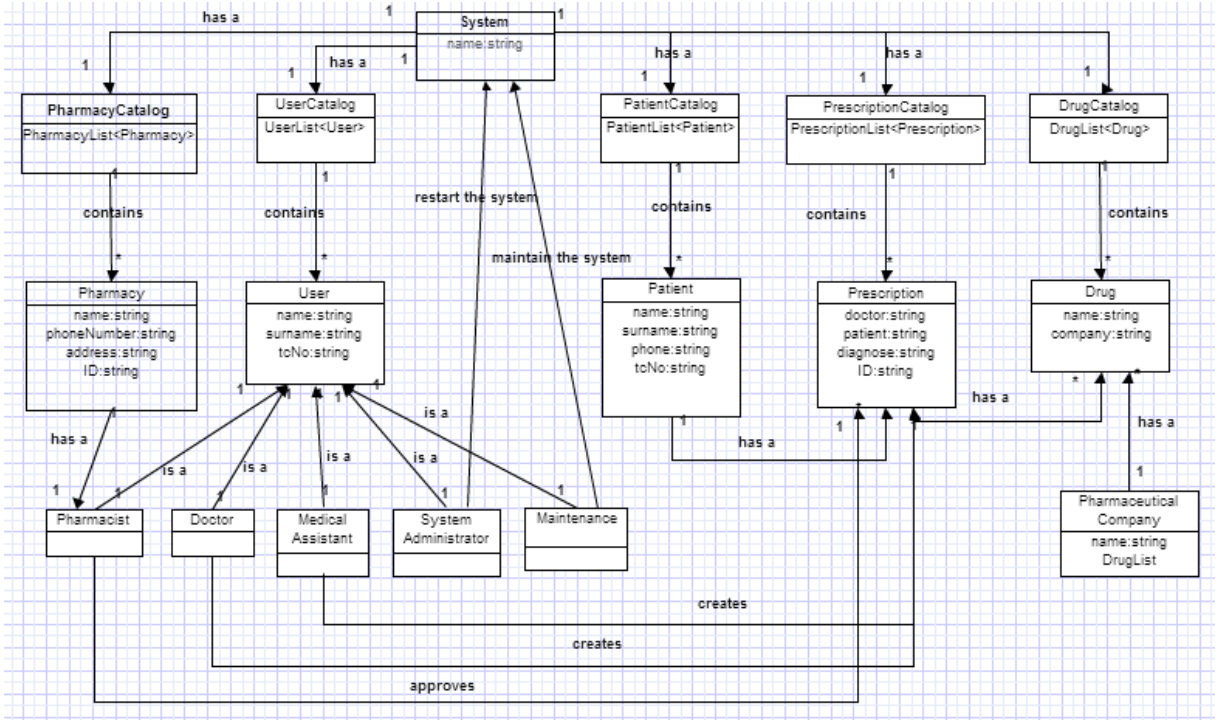
Name	**Add New Pharmacy**
Goal in Context	System admin adding a new pharmacy to system.
Actor	System administrator
Preconditions	System administrator should be logged in to system.
Main Scenario	1. System administrator sends a request to system to add new pharmacy. 2.System displays the add pharmacy screen. 3. System administrator entered a new pharmacy information. 4. System administrator entered a unique value as a username for a new pharmacy. 5. System administrator approves new pharmacy information. 6.Added a pharmacy. 7. System administrator log out the system.
Exceptions	4.There is no unique ID for new pharmacy. 6.System is not allowed to add a new pharmacy. *At any time, system fails.
Scope	When adding a new pharmacy.
Stakeholders & Interests	System administrator, pharmacist, doctor, medical assistant, maintenance engineer, Ministry of Finance, Ministry of Health, Insurance Company, Pharmacy Stock System, Pharmaceutical Company

Name	**Add New Doctor**
Goal in Context	System administrator adding a new doctor to system.
Actor	System administrator
Preconditions	System administrator should be logged in to system.
Main Scenario	1. System administrator sends a request to system to add new doctor. 2. System displays the add doctor screen. 3. System administrator entered a new doctor information. 4. System administrator entered a unique value as a username for a new doctor. 5. System administrator approves new doctor information. 6 .Added a doctor. 7 . System administrator log out the system.
Exceptions	4. There is no unique ID for new doctor. 6. System is not allowed to add a new doctor. *At any time, system fails.
Scope	When adding a new doctor.
Stakeholders & Interests	System administrator, pharmacist, doctor, medical assistant, maintenance engineer, Ministry of Finance, Ministry of Health, Insurance Company, Pharmacy Stock System, Pharmaceutical Company

Name	**Add Prescription**
Goal in Context	Preparing and Adding a new prescription to the system
Actor	Doctor & Medical Assistant
Preconditions	A registered doctor should be logged in to the system
Main Scenario	1. Doctor sends a request to add new prescription 2. Adding prescription page is displayed 3. Doctor enters the patient information, diagnosis information and medication information 4. Distinct prescription ID is randomly generated and displayed. 5. Doctor presses the OK button.
Exceptions	4. System cannot generate a new distinct prescription ID. (eg. not enough 15 digit numbers) *At any time, system fails.
Stakeholders & Interests	Doctor & Medical Assistant, Pharmacist, Insurance Company, Ministry of Health

Name	**Approve Prescription**
Goal in Context	Approve and inactivate existing prescription that are added by doctors
Actor	Pharmacist
Preconditions	A registered pharmacist should be logged in to the system
Main Scenario	1. Pharmacist enters the prescription ID to the system 2. System searches the prescription from the database 3. Checks the stock database and specifies available drugs and calculates total price 4. Shows the prescription with stock and price information 5. Pharmacists selects the drugs that are going to be sold and presses the Approve button 6. If all the drugs in the prescription are selected prescription will be inactivated. 7. Else selected drugs are inactivated.
Exceptions	2. Prescription cannot be found.
Stakeholders & Interests	Pharmacist, Insurance Company, Ministry of Health

Domain Model as a UML Class Diagram



Conclusion

In this report we identified The Viewpoints: Indirect, Interactor and Domain VPs,

and their Requirements. Both considering functionality and lifetime. And also we prepared fully dressed use cases (critical ones) which gives a significant idea of how the project process is going to be.

Teamwork: All contributions are equal and %20.