FEASIBILITY REPORT
FOR
AGV BASED SCENE INTERPRETATION

VERSION 1.0

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1 Introduction

1.1 Introduction

Cloud based mostly ERP resolution for attention could be a sort of Enterprise Resource coming up with (ERP) code that's hosted on a cloud computing platform, instead of on premises among associate degree enterprise's own knowledge center. Cloud based mostly mean you access this technique anyplace, any time through any device. currently days each trade needs to adopt management system in their organization. this technique is intended to integrate totally different departments of the health.

1.2 Overview Of Project

Cloud based ERP answer for human services is an adjustable arrangement in which each division is associated with a primary framework .This framework includes facility the executives framework , emergency clinic the executives framework , specialist the board framework , internet booking the executives framework , patient detailing framework , account the board framework . The data is accumulated in a focal spot and the product makes specific re-ports that empower the administration to settle on better choices, quicker.

1.3 Background

The task incorporates enrollment of patients, putting away their subtleties into the framework, and furthermore mechanized charging in the drug store, and labs and so forth. Human services is a field wherein precise record keeping and correspondence are basic. With the expansion of interest in emergency clinics, we need successful information the executives framework for taking care of patient's information, staff information and treatment subtleties in a powerful manner. It manages the gathering of patient's data, finding subtleties and so on. The fundamental expectation of acquainting this framework is with diminish the manual work at Health focus counters. Faster handling of receipt would mean better support of the patients. It would likewise help in the unpredictability of keeping up the records physically and hence less time is squandered on revamp. The framework is utilized to enter the patient subtleties and to enter the insights concerning the wellbeing focus and the insights concerning the in-persistent and out-tolerant in detail and about the reports of the patients and some more.

1.4 Motivation

The task incorporates enrollment of patients, putting away their subtleties into the framework, and furthermore mechanized charging in the drug store, and labs and so forth. Human services is a field wherein precise record keeping and correspondence are basic. With the expansion of interest in emergency clinics, we need successful information the executives framework for taking care of

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2 Scope of the project

Healthcare ERP software supports every facet of your business. From appointment scheduling to updating patient records while in the field, purchasing, invoicing and accounting and all the way to back-end processes, inventory and logistics, your staff has faster, more intuitive access to information when they need it most.

2.1 Objects

It will also on its autonomous journey detect the following scenarios/objects:

- Patient:
    1. Patient can register/login into the system
    2. Patient can view different categories of department
    3. Patient can search doctor according to name, specialization, location etc.
    4. Patient can view doctor's detail
    5. Patient can view price and payment lists
    6. Patient can book a doctor
    7. Patient can see his/her previous record
    8. Patient can give reviews
- Doctor:
    1. Doctor can register/login into the system
    2. Doctor can add more than one clinic record where he/she works
    3. Doctor can add patient in particular clinic
    4. Doctor can see booked and available appointments slots
    5. Doctors can view previous record of patient if he/she has been his patients in past
    6. Doctor can edit his/ her profile
    7. Doctor has his /her own dashboard 8. Doctor can add appointment of patient
- Hospital Accountant:

1. He/she can register / login into the system
2. He/she can has his/her own dashboard
3. He/she can manage invoices
4. He/she can edit his /her profile
5. He/she can manage payroll of his staff
6. He/she can manage expenses of hospital
7. He/she can manage patient payments
8. He/she can manage doctor payments
9. He/she can manage cash reports i.e. credit card reports or debit card reports

- Clinical Staff / Pharmacist:
    1. He/she can register / login into the system
    2. Pharmacist has his/her own dashboard
    3. He/she can add medicine
    4. He/she can /view all medicine that are remaining
    5. He/she can have a record of medicine sale
    6. He/she can edit his /her profile
    7. He/she keeps record of all patient prescriptions
- Laboratories
    1. Laboratorist can register/login into the system
    2. Laboratorist has his/her own dashboard
    3. Laboratorist can manage a blood bank
    4. Laboratorist can have all records of tests
    5. Laboratorist can keep a record of blood donations
    6. Laboratorist can edit his/her profile
- Administrative Staff
    1. He/she can register/login into the system
    2. He/she has his/her own dashboard showing main records of major categories
    3. He/she can manage different department into system
    4. He/she can manage doctors
    5. He/she can manage patients
    6. He/she can manage clinical staff
    7. He/she can manage laboratorists.
    8. He/she can monitor whole hospital i.e. payment history , bed allotment , blood bank , blood donors , medicines , operation reports , birth reports , death reports etc.
    9. He /she can manage his/her profile
    10. He/she can manage payroll records
    11. He/she can has hospital noticeboard

3 Problem Statement

In the busy world, people don't have enough time to go to doctor and wait for more than 2 or 3 hours for their turn. Sometimes, people forget their previous reports at home. Curics provides online booking at home and patients can go to clinic at their time and they don't have to wait long enough. All their previous records will be saved in our systems and they don't have to carry their medical reports everywhere. If people don't have time to go to clinic, they can contact specific doctor at home.

4 Application Areas

- Clinics
- Hospitals
- Laboratories
- pharmacy

5 Existing System

5.1 Details of Existing Systems

Mostly the existing system running in Pakistan is MARHAM.COM which is going well and the purpose of this system is actually to provide the online appointments to the people using this system. The service is going well in Pakistan but needs some of facilities which must be there in the system. Also, they provide service to the patients by giving the token number which is allotted from the doctor's clinic. So they call to doctor's clinic and take the time from that doctor and give the complete information to the patient. Also, some online chatting service, call service, doctor's information is present on their website. Some of the international systems are also working on this telehealth system which are as follows:

- American Well offers healthcare visits by video and phone, though the vast majority are video. The vendor supports patient-to-provider, provider-toprovider and multi-party video visits as well as service lines and practices that enable healthcare organizations to customize the healthcare experience for their providers and patients. Organizations can brand a service, a specialty or a facility, and have a different look and feel or workflow for each of the service lines.
- Doctor on Demand views itself as a nationwide medical practice connecting consumers with board-certified physicians in an on-demand fashion. Consumers can gain access to a provider within minutes on a mobile device or a desktop or laptop with a camera. The company only offers video visits because the physician conducts a visit in the same way as he or she would

in a brick-and-mortar setting, with a history, examination and treatment plan.

- Polycom touts its high-quality audio and video and its content communication capabilities on various platforms, from a basic codec that one hooks up to a TV to a rolling cart that moves from room to room to things like telepsychiatry on a desktop. In addition to these codec systems, Polycom also has software-enabled systems, such as mobile software for iPads and Android devices, as well as software for Macs and PCs, all with the ability to provide up to HD video. Polycom also offers APIs that other vendors can use to integrate Polycom software into their systems.

5.2 Comparison of Existing Systems

This section is devoted to the definition of the most appropriate ways of comparingofthehealthcaresystems.
ThecurrentsysteminPakistanismarham.com is the site currently based on telehealth taking patients as the consulting to the doctors using their system. But there are lot flaws in their system. The don't allow chat with the doctor. They don't have patient previous record or history as there system is not connected properly so we are providing a complete connected and reliable system which manages patient previous records and details and all information about a patient. Our system provide a complete management system including laboratory management system, hospital and clinic management system. When we talk about revenue the marham.com us currently earning by applying different add engine in there website but we are not going to make a website we are going to make a platform so we will make our revenue by charging patients to use our system. We will also give some revenue to our professional using the system and also charge some of it percentage so that we can earn from it. Also a rating and review system will also be applied on our system which actually shows the service given by the doctor. So as the rating of the doctor will remain on high note most of the patients recommend him.

6 Software Development Life Cycle:

Following the best stages of SDLC ensures the process works in a smooth, efficient, and productive way.

6.1 Identify the Problem:

In the busy world, people don't have enough time to go to doctor and wait for more than 2 or 3 hours for their turn. Sometimes, people forget their previous reports at home. Curics provides online booking at home and

patients can go to clinic at their time and they don't have to wait long enough. All their previous records will be saved in our systems and they don't have to carry their medical reports everywhere. If people don't have time to go to clinic, they can contact specific doctor at home. Moreover, doctors have to hire many employee to manage their clinics data. Usually there are many problems in order to manage hospitals and labs data.

6.2 Planning:

CuricsforHealthcareManagementimpliescentralizedadministrationtomainta in a common code-based cloud application and is easily customizable according to the actor demand. User can ask for features he/she wants to have in system and system will be ready automatically according to his requirements. Curics can access from anywhere and from any device.

Main actors of this system :Hospitals Clinics Laboratories Patients

6.3 Resources and Requirements:

Main actors of this system :Internet Connection Dedicated Server Any Operating system Cloud platform for database Platform: Laravel, React Native, Core PHP, JavaScript

6.4 Cost:

As a web mobile based application Curics will have associated server cost, which will increase according to server requirements that are directly proportional to number of customers. At initial stage the target market will be local clinics which will not require that much of bandwidth.

6.5 Designing and implementation:

Curics for healthcare Institutes is designed in such a way that the user can easily interact with the screen because of GUI. The database is implemented using the cloud-based platforms. Curics is available for multiple device and works on both mobile phone and computer. Curics is user friendly and do not demands any technical skills from the users. Here are some limitations and challenges will occur in our project. These are listed below: Collection of a large dataset is also a big challenge in the implementation of this project. For purchasing domain name extensive nancial resources are required. We have to face challenges to run Curics in Pakistan. Proper rules are required so no one can access the other's accounts. We must stop spams to attack on our system. Curics needs proper protection in order to protect it from hackers

6.6 Testing:

In this stage, we test for defects and deficiencies. We fix those issues until the product meets the original specifications. E.g. Can patients enter their data?

- Can patients book their appointments at home?
- Is there any issue regarding curics app?
- Can doctors, hospitals staffs manage their work?
- Is data safe on our project? And so on so far.

6.7 Deployement:

Curics will become operational after once deployed on a web host and will be available on the cloud for the customers. They can access Curics via web and mobile application anywhere anytime. Curics is much easy to operate and do not require any technical skills from the user.

6.8 Maintenance:

In this stage, we will manageour project. And as number of doctors, hospitals increases we will increase our hosting space. And we will add new features in our project.

6.9 SDLC Used:

We are using scrum model to complete our project. In this model we are dividing our project in sprints. Usually we complete our tasks in one week.

6.10 Justification of SDLC:

Scrum has more transparency and visibility than any other methodology. It increases the team accountability. Scrum is easy with changes. It accommodates changes. So this model is very suitable for us as we can visit our advisor after 1 week and we can check him our progress report. If he asks us to add something or change something in our project. It is easy for us to fulfil his desire.

7 Requirement Analysis

7.1 Functional Requirements

For Developers:

7.1.1 Hardware

Requirements – 1.

Implementation Phase:

Intel i5 CPU, with an i7 recommended.

8GB RAM, with 16GB recommended.

1920 x 1080 resolution display.Intel i5 CPU, with an i7 recommended.

– 2. Deployment Phase:
  Web server
– 3. Running Phase
  Web server

7.1.2 Software

Requirements – 1.

Implementation Phase:

Laravel, Ajax, Html, CSS, mysql , Php, vscode, ... Ms word used for documentation.

– 2.

Deployment Phase:

– 3. Running

Phase Cloud Url For

Users:

7.1.3 Hardware Requirements

– Mobile , Laptop , Tablet with strong internet connection.

7.2 Other Nonfunctional Requirements

7.2.1 Performance Requirements

The proposed system will be used as the chief performance system for providing help to department in managing the clinics, hospitals, laboratories and patient record. The system will perform all the requirements accurately:

– The system must be simple to handle.
– The response time must be less.
– The expected output must be obtained.

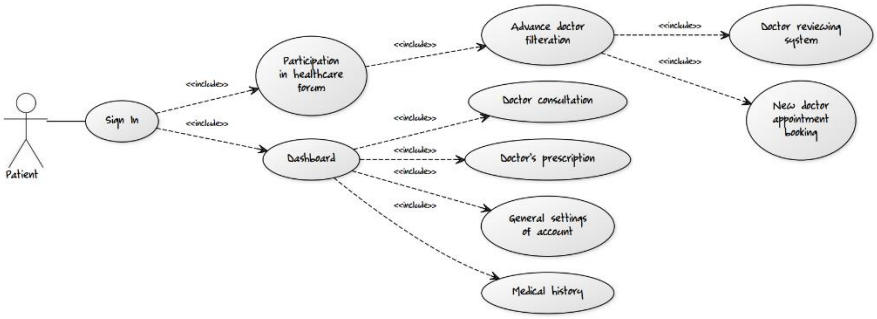
7.2.2 Safety Requirements

The database may crash due to any operating system failure or virus. Hence, to be on the safe side we should have database backup.

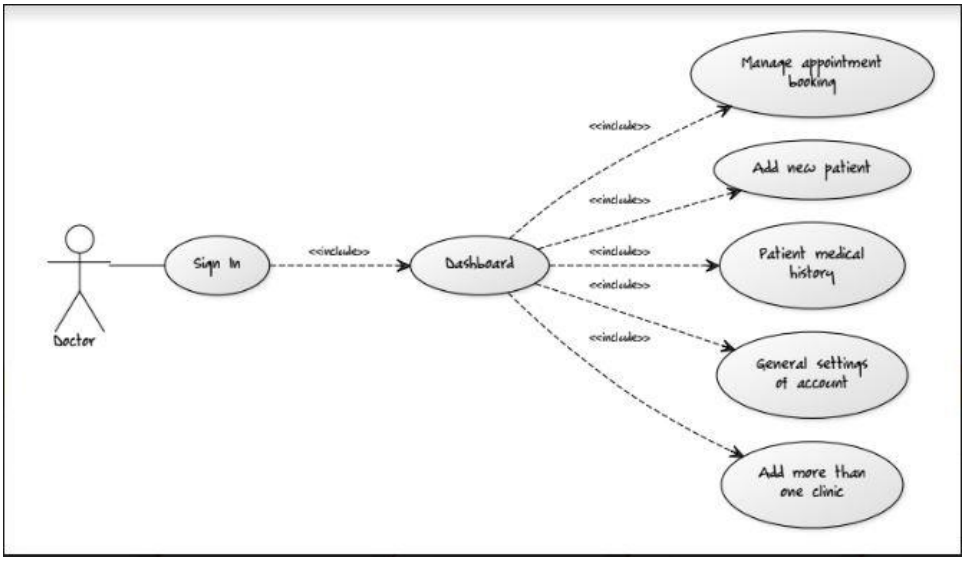
– pharmacist Dashboard

7.4 Use Case Diagrams:

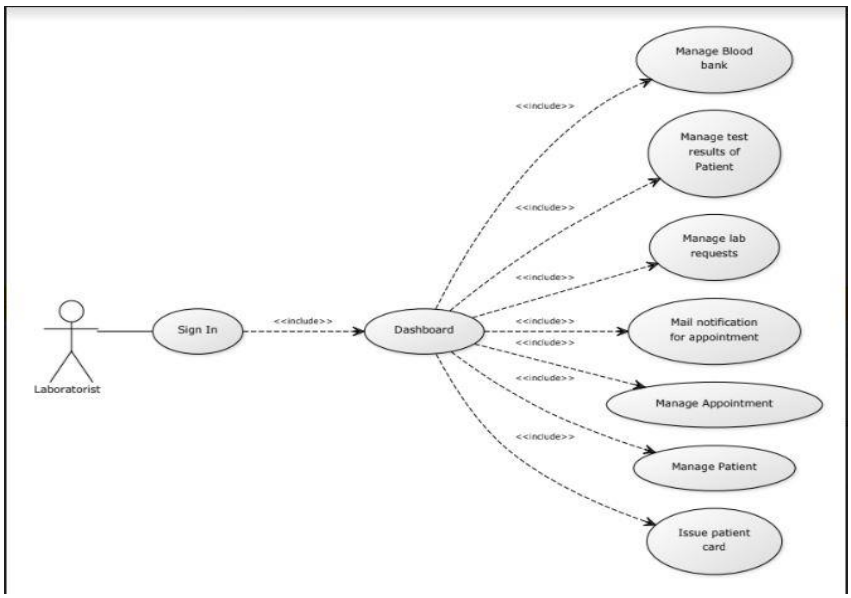
- patient



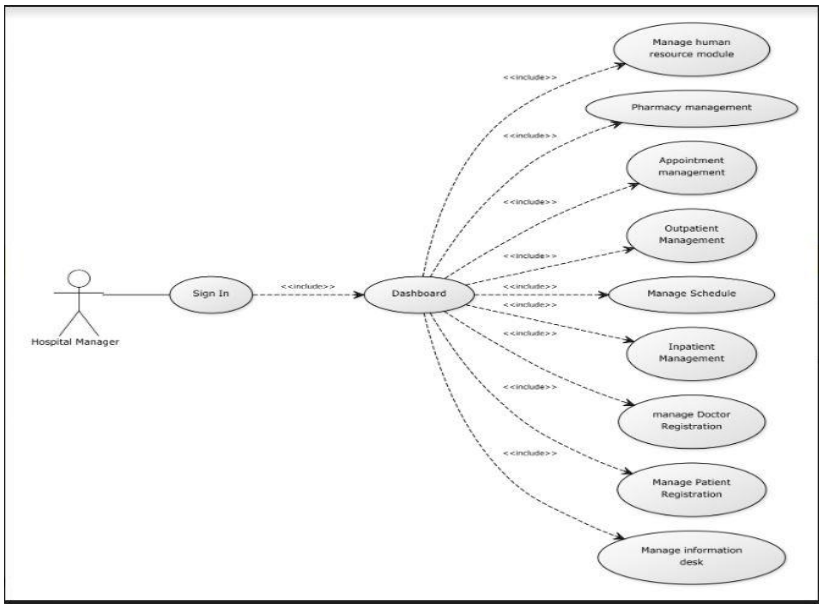
- Doctor



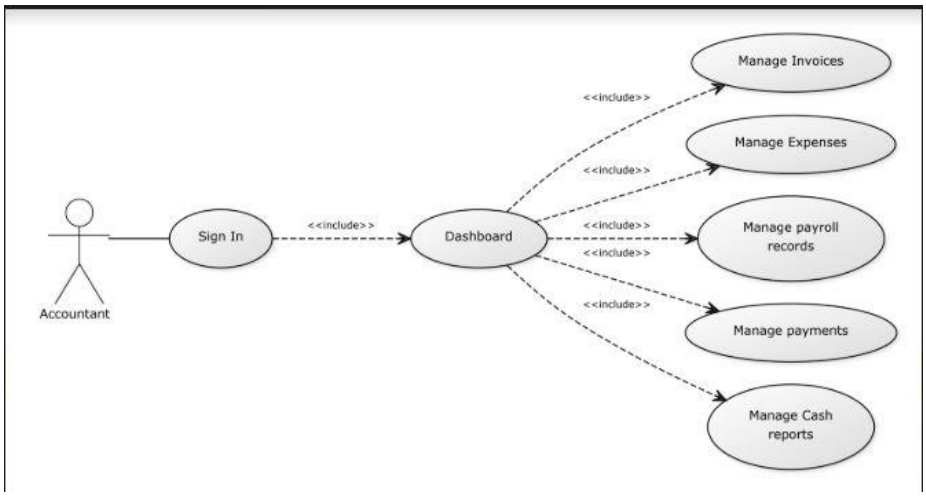
- Laboratorist



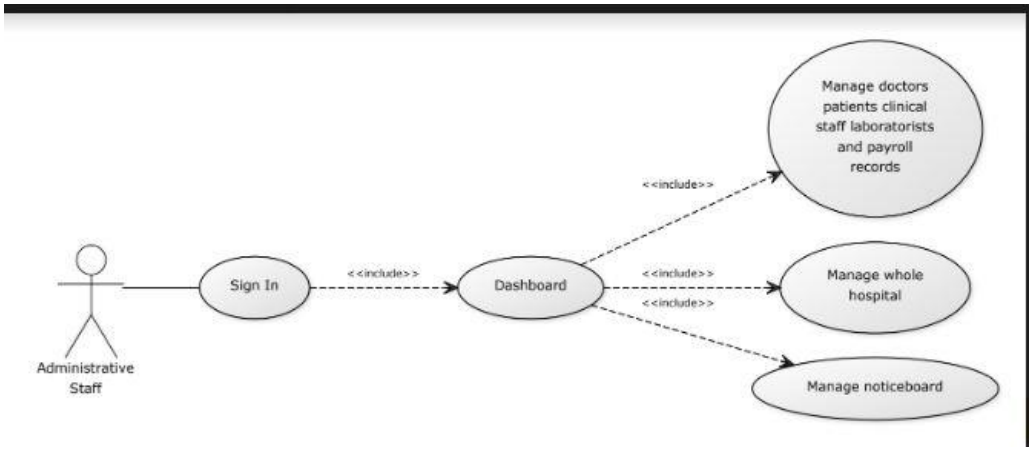
- Hospital



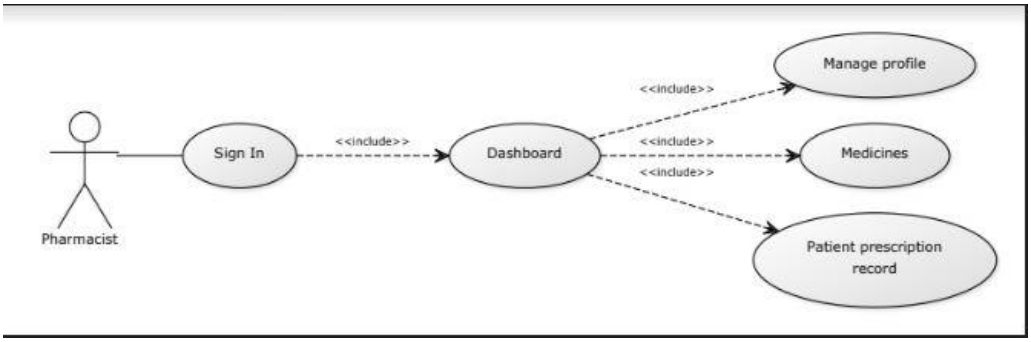
- Accountant



- Administrative staff



- Pharmacy staff



7.5 **Use Case Text:**

- Sign In

Actors		Patient , Doctor ,Pharmacist , Administrative Staff , Laboratorists , Hospital accountant
Preconditions		Should have an account to sign in.
Normal Flow	Description	System checks for the given email and password.
	Postconditions	Users are navigated to their own dashboard
Alternative flows and exceptions		If the email and password does not matches with record then user should make new account
Non functional requirements		dependability (safety, reliability, etc.)

- Search Doctor

Actors		Patient
Preconditions		Search by location , gender , specialization
Normal Flow	Description	Systems checks the doctor according to the given criteria
	Postconditions	All required doctors are shown to the patient
Alternative flows and exceptions		Contact doctor.
Non functional requirements		dependability (safety, reliability, etc.), performance.

- Book an appointment

Actors		Patient
Preconditions		Should sign in into the system
Normal Flow	Description	Patient will book an appointment by seeing the available time and day and book the appointment
	Postconditions	He/She will get a confirmation messege
Alternative flows and exceptions		He/She dnt have account or Book appointment that is already booked by other patient or it is canceled by doctor.
Non functional requirements		Its performance should be normal.

- Patient Dashboard

Actors		Patient
Preconditions		Patient should sign into the system.
Normal Flow	Description	Should manage Appointment history , Review history , Review general settings
	Postconditions	Change anything according to his/her will.
Alternative flows and exceptions		Patient would not have any dashboard to maintain his/her record.
Non functional requirements		Its performance should be normal

- Doctor Daashboard

Actors		Doctor
Preconditions		Doctor should sign into the system.
Normal Flow	Description	Should manage Appointment booking of patients , Add new patient , See records of more than one clinic ,Can see booked or available slots ,Review past history of patients.
	Postconditions	Change anything according to his/her will.
Alternative flows and exceptions		Doctor would not have any dashboard to maintain his/her record.
Non functional requirements		Its performance should be normal , it should be independent.

- Accountant dashboard

Actors		Accountant
Preconditions		Accountant should sign into the system.
Normal Flow	Description	Should manage Cash reports , payments,payrolls,expenses , invoices and Edit hiss//her profile.
	Postconditions	Change anything according to his/her will.
Alternative flows and exceptions		Accountant would not have any dashboard to maintain his/her record.

Non functional requirements	Its performance should be normal

- Pharmacist dashboard

Actors		Pharmacist
Preconditions		Pharmacist should sign into the system.
Normal Flow	Description	Should manage medicines , and patient prescription's records
	Postconditions	Change anything according to his/her will.
Alternative flows and exceptions		Pharmacist would not have any dashboard to maintain his/her record.
Non functional requirements		Its performance should be normal

- Laboratorists Dashboard

Actors		Laboratorist
Preconditions		Laboratorist should sign into the system.
Normal Flow	Description	Should manage Blood donations, Records of test , blood bank , maintain his/her profile.
	Postconditions	Change anything according to his/her will.
Alternative flows and exceptions		Laboratorist would not have any dashboard to maintain his/her record.
Non functional requirements		Its performance should be normal

- Administrative staff dashboard

Actors		Administrative staff
Preconditions		Administrative staff should sign into the system.
Normal Flow	Description	Should maintain a regular noticeboard ,mange whole hospital like reports and blood records ,Manage all doctors , patients , clinical staff, pharmacist ,laboratorists etc and maintain his/her profile.
	Postconditions	Change anything according to his/her will.

Alternative flows and exceptions	Administrative staff would not have any dashboard to maintain his/her record.
Non functional requirements	Its performance should be normal

7.6 Test Cases:

Sign In

- User should has an email id and unique password

Apointment booking:

- Patient should sign in into account
- Patient should book only available slots of appointment
- Patient should receive confirmation message after booking.
- Doctor should receive appointment request and can accept or delete this.

Manage patient:

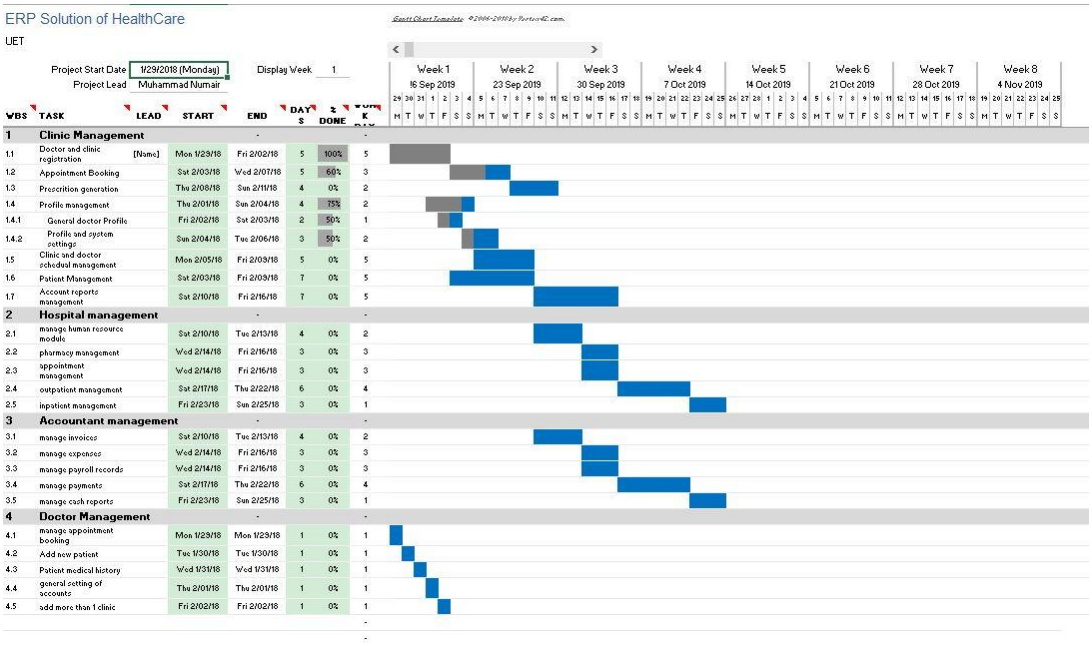
- Doctor should make a new entry of patient
- Doctor should see medical history of patients
- Patient can login to the system
- Patient should have their own dashboard
- Patient should have separate medical history of every clinic
- Patient should seek online consultation of doctor

Manage records:

- Manage payroll records of whole hospital staff
- Manage payments
- Manage all invoices
- Manage all cash reports

8 Planning

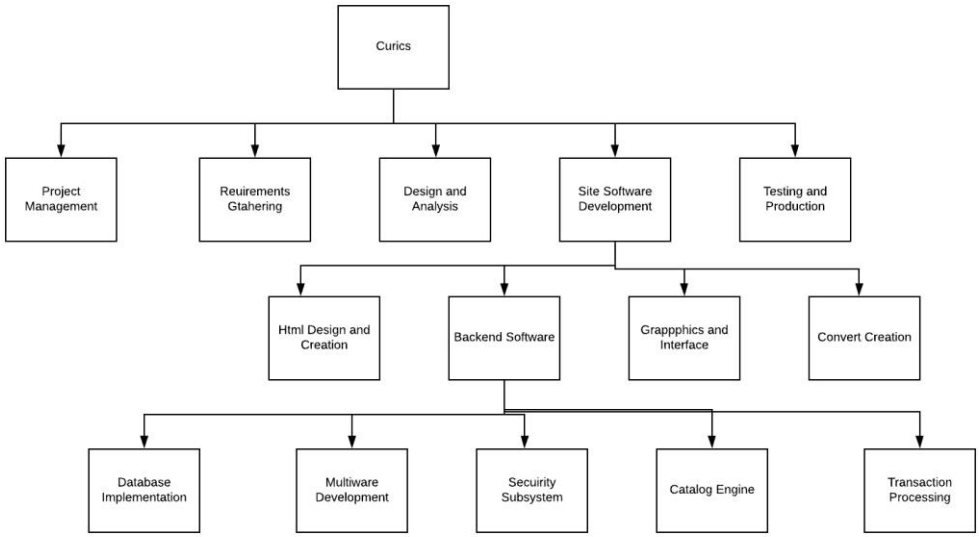
8.1 Miletstones:



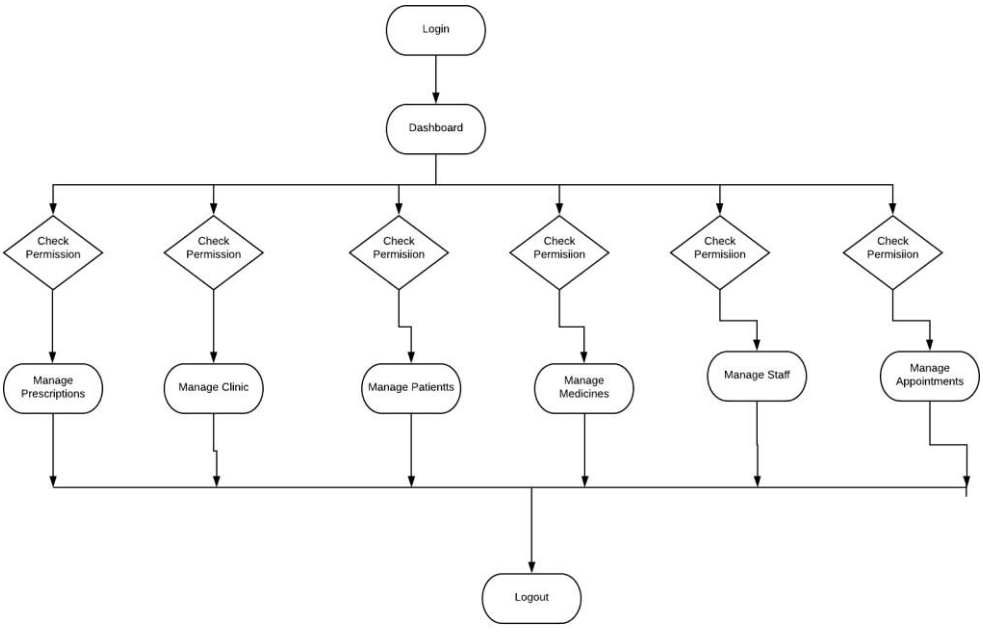
WBS	TASK	LEAD	START	END	DAYS	% DONE	TASK DAYS
1	**Clinic Management**			-			-
1.1	Doctor and clinic registration	[Name]	Mon 1/29/18	Fri 2/02/18	5	100%	5
1.2	Appointment Booking		Sat 2/03/18	Wed 2/07/18	5	60%	3
1.3	Prescrition generation		Thu 2/08/18	Sun 2/11/18	4	0%	2
1.4	Profile management		Thu 2/01/18	Sun 2/04/18	4	75%	2
1.4.1	General doctor Profile		Fri 2/02/18	Sat 2/03/18	2	50%	1
1.4.2	Profile and system settings		Sun 2/04/18	Tue 2/06/18	3	50%	2
1.5	Clinic and doctor schedual management		Mon 2/05/18	Fri 2/09/18	5	0%	5
1.6	Patient Management		Sat 2/03/18	Fri 2/09/18	7	0%	5
1.7	Account reports management		Sat 2/10/18	Fri 2/16/18	7	0%	5
2	**Hospital management**			-			-
2.1	manage human resource module		Sat 2/10/18	Tue 2/13/18	4	0%	2
2.2	pharmacy management		Wed 2/14/18	Fri 2/16/18	3	0%	3
2.3	appointment management		Wed 2/14/18	Fri 2/16/18	3	0%	3
2.4	outpatient management		Sat 2/17/18	Thu 2/22/18	6	0%	4
2.5	inpatient management		Fri 2/23/18	Sun 2/25/18	3	0%	1
3	**Accountant management**			-			-
3.1	manage invoices		Sat 2/10/18	Tue 2/13/18	4	0%	2
3.2	manage expenses		Wed 2/14/18	Fri 2/16/18	3	0%	3
3.3	manage payroll records		Wed 2/14/18	Fri 2/16/18	3	0%	3
3.4	manage payments		Sat 2/17/18	Thu 2/22/18	6	0%	4
3.5	manage cash reports		Fri 2/23/18	Sun 2/25/18	3	0%	1
4	**Doctor Management**			-			-
4.1	manage appointment booking		Mon 1/29/18	Mon 1/29/18	1	0%	1
4.2	Add new patient		Tue 1/30/18	Tue 1/30/18	1	0%	1
4.3	Patient medical history		Wed 1/31/18	Wed 1/31/18	1	0%	1
4.4	general setting of accounts		Thu 2/01/18	Thu 2/01/18	1	0%	1
4.5	add more than 1 clinic		Fri 2/02/18	Fri 2/02/18	1	0%	1
							-
							-

8.2 Work Breakdown Structure:

- For guest user work :



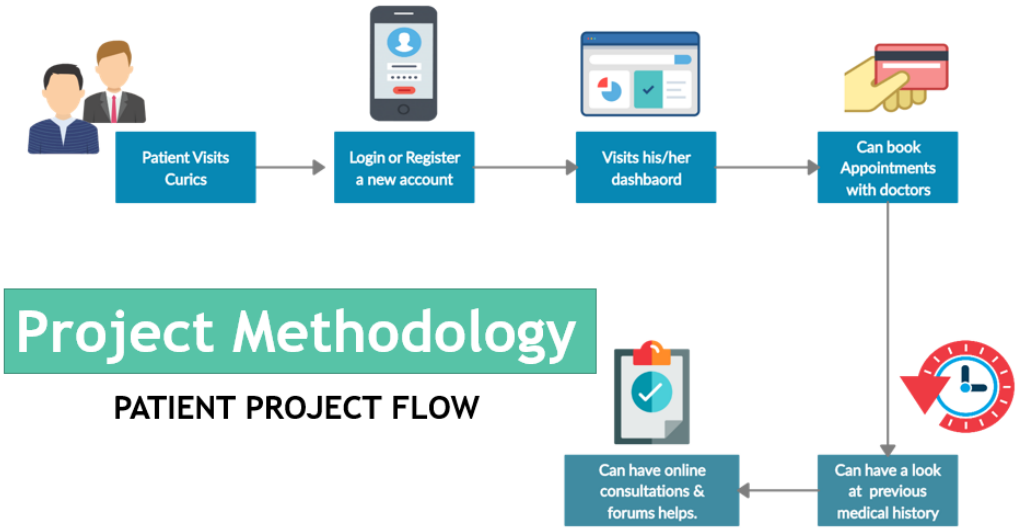
- Doctors/Hospital manager/Pharmacist/Laboratorists/ Clinical staff



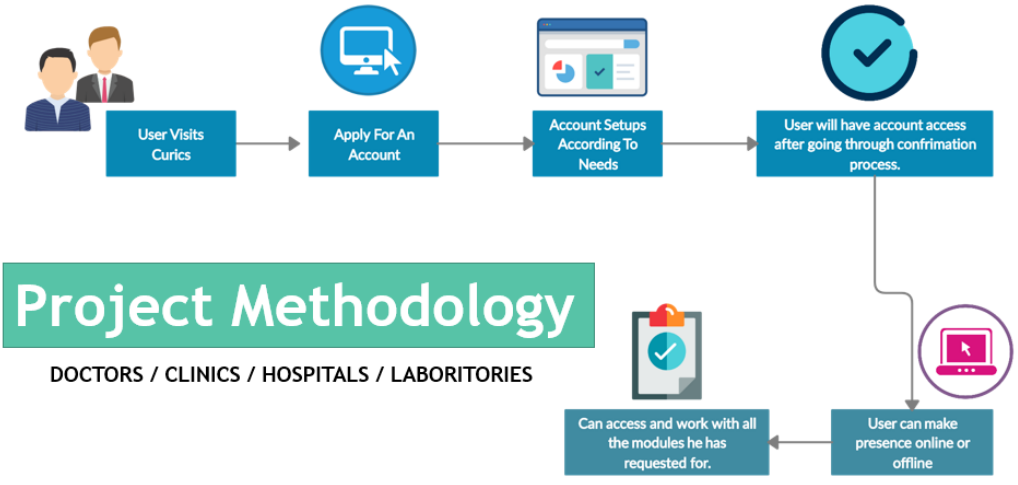
9 Design

9.1 Data Flow Diagram:

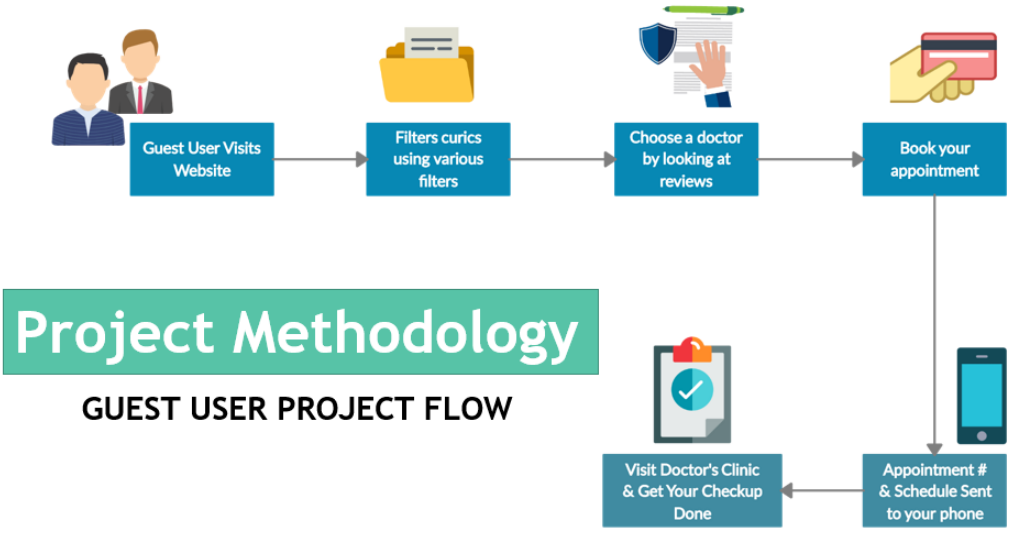
- Patient



- For Doctors / Clinics / Hospitals / Laboratories

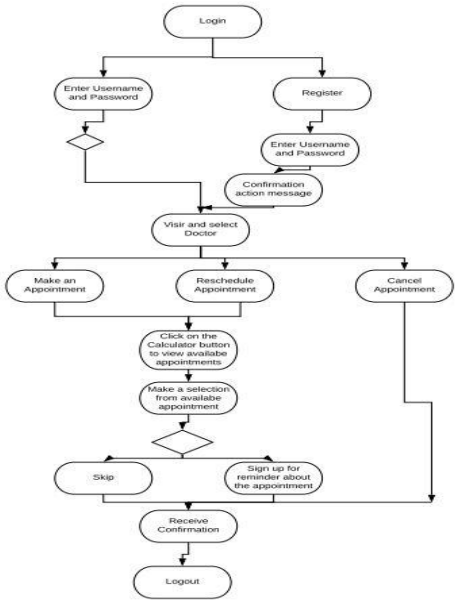


- Guest Users

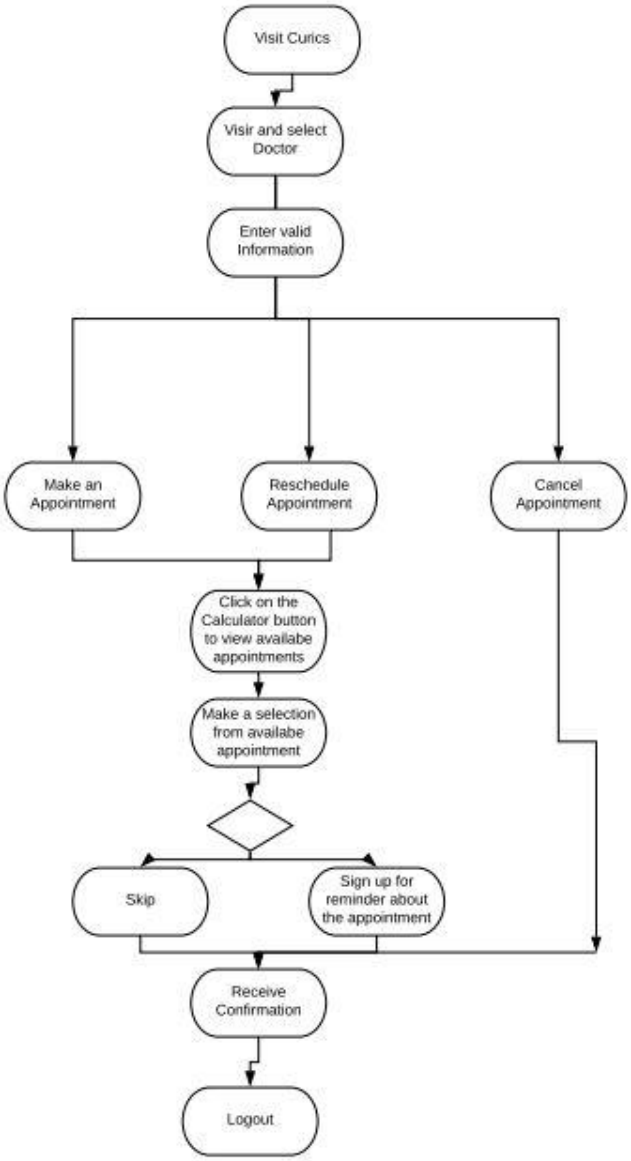


9.2 **Activity Diagram:**

- For patient

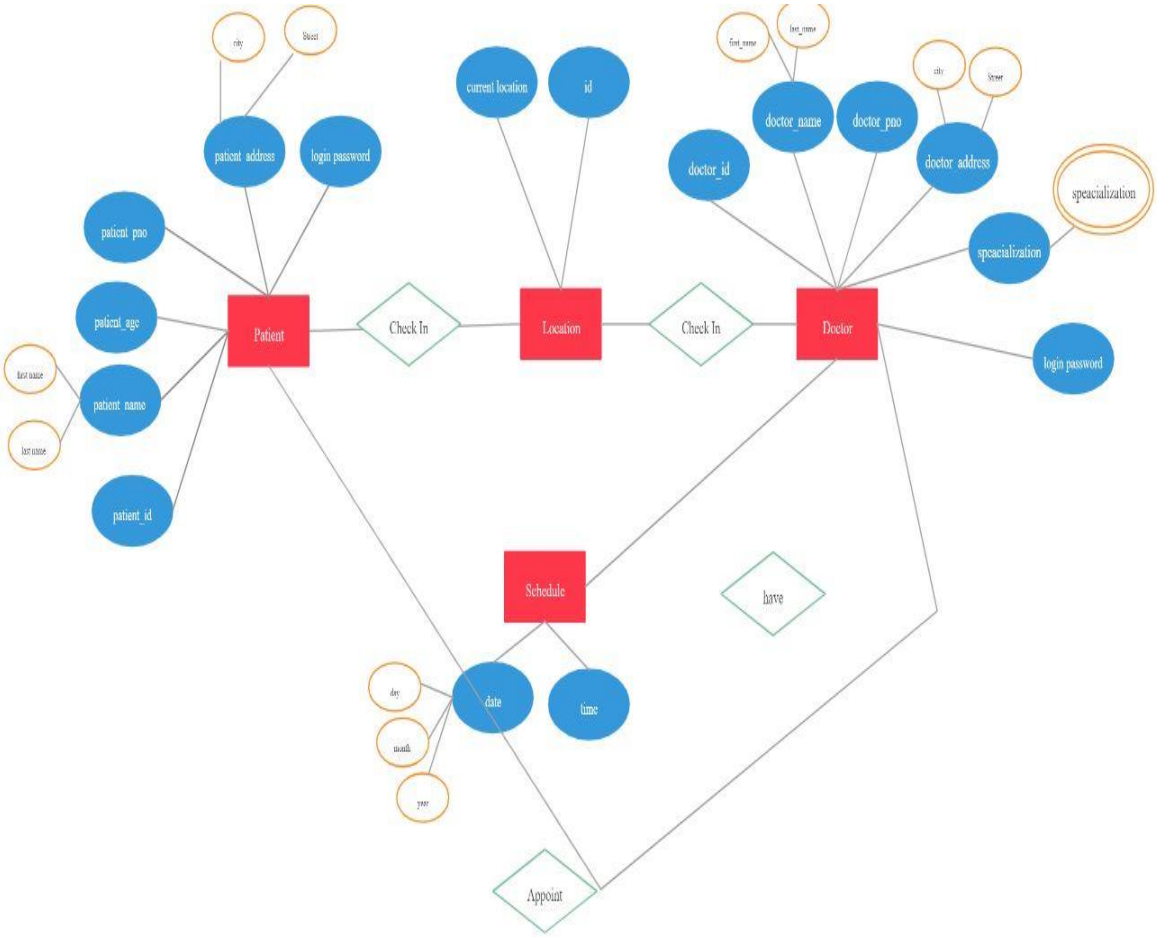


- Guests


Visit Curics
Visir and select Doctor
Enter valid Information
Make an Appointment
Reschedule Appointment
Cancel Appointment
Click on the Calculator button to view availabe appointments
Make a selection from availabe appointment
Skip
Sign up for reminder about the appointment
Receive Confirmation
Logout

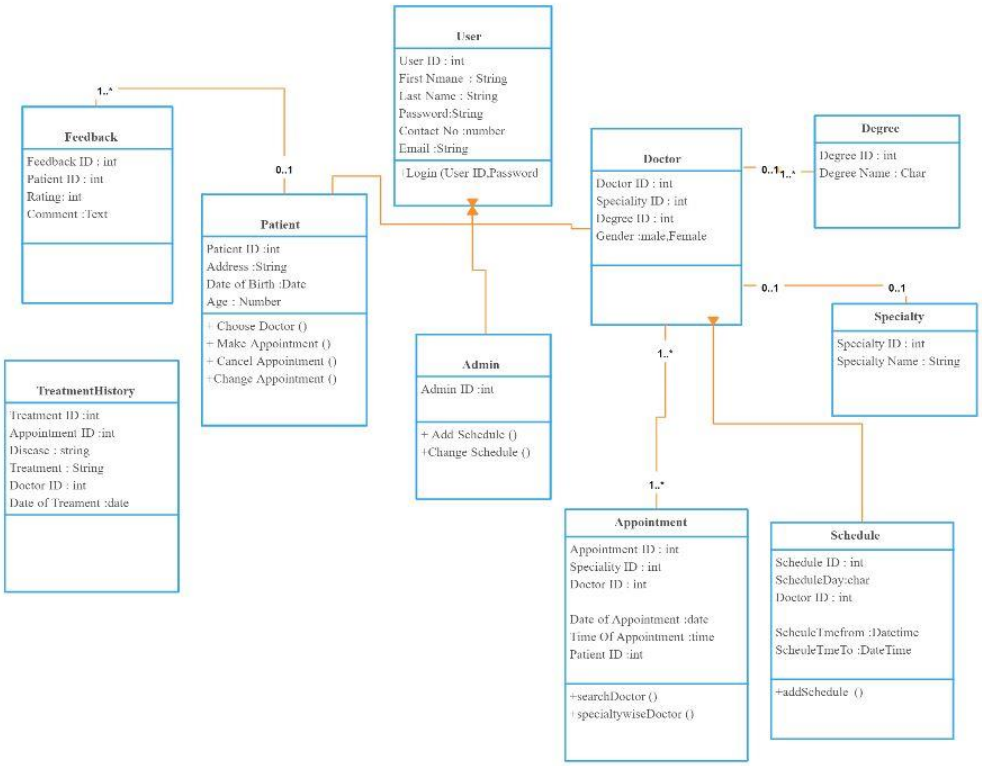
9.3 **Database Modeling:**

- ER Diagram:



- Database Diagram:

Class Diagram:



10 Reference

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