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Creation of Computer based Healthcare Information System (CBHIS)

Amirineni Ganesh[1],M.Sujatha[2],SS.Asadi[3]

1.Technical Assistant,Department of Civil Engineering, Vignan's Foundation for Science, Technology and Research, Vadlamudi–522213, Guntur district, A. P., India.

2.Associate Professor, Division of Ecology and Environment, Koneru Lakshmaiah Education Foundation, Green fields, Guntur, Andhra Pradesh ,India

3.Professor, Department of Civil Engineering, Vignan's Foundation for Science Technology and Research, Deemed to be University,Guntur, A.P., India - 522 213.

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***Abstract*:**
This study is a Computer Based application which gives online medical services to the people at their doorstep.This study is help village level people to provide the medical facilities,Where doctors are unavailable.There are basically three users, patients, non-members andadministrators.All the users have their own username and password.Patients can login to the site, give their symptoms,and answer to our questions,then they can receive diagnose and suggest the medicines. By using the diagnose the user can get the medicines bylocal chemist.Doctors can join to this site for viewing and correcting the disease cure.Administrators have the authority to add/delete users, write relevantqueries to retrieve any information from the database.

Keywords: Computer Based Healthcare Information System, E Health Care Advisor,Unified Modelling Language (UML).

1.INTRODUCTION

E HEALTH CARE ADVISOR is computer based health care information system is an interactive blog on diseases. Users in this health care system are Patients, non-members and administrators. Users can login to this site and by answering to some questions they get diagnose report so that patients canget the medicines at local chemist without any prescription. Doctors can also login to this site to verify their doubts and also to upload new information. Administrators can also login to this site to maintain database, secure patients list and upload information.

2. OBJECTIVES

To create and implement a computerbased Healthcare Information System.

3. METHODOLOGY

3.1 Methodology overview

- There are basically three users-patients, non-members and administrator.
- All the users have their own username and password.
- Patients can login to the site, give their symptoms, and answer to our questions ,then they can receive the diagnose.
- By using the diagnose the user can get the medicines by local chemist.

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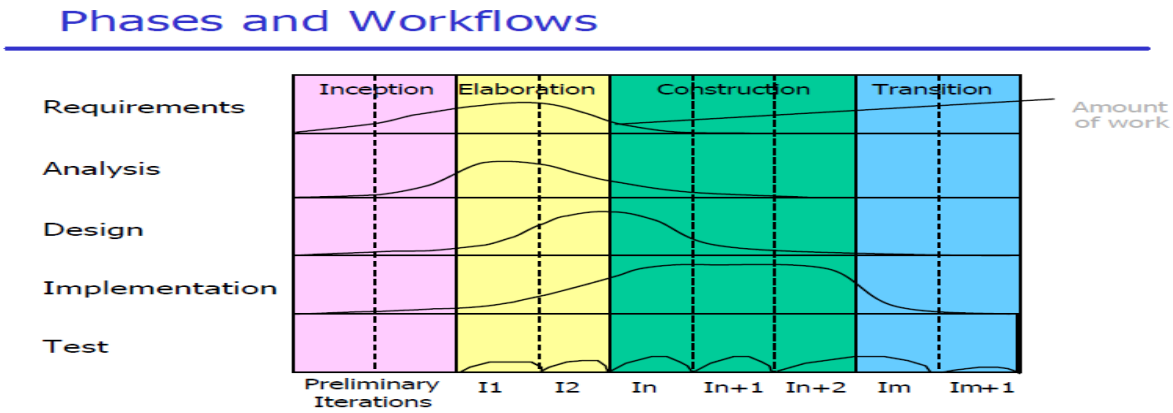
- Doctors can join to this site for viewing and correcting the disease cure .
- Admin has the authority to add/delete users, write relevant queries to retrieve any information from the database.

3.2 Software Requirements Specification

3.2.1 Unified Software Development

The Unified Software Development Process (Unified Process) is a process that uses the Unified Modelling Language(UML) to prepare the blueprints of a software system. USDP is the iterative and incremental software engineering process for the UML.

- We opted to use the UML, together with elements of the Unified Software Development Process for our design process.



3.3 Product Perspective

The proposed system is an application used by the patients, doctors and also by the administrator. This system will provide the administrator to add data to the database and also can take the decisions. The product perspective is to conduct diagnose to identify the diseases.

3.4. Functional Requirements

3.4.1 Registration

Only registered users should be able to use resources in the system.Patients can post their problem and get the diagnostics verified prior by the doctor.Doctors can upload the information about diseases and provide prescriptions and can download the patient list and their reports.Administrator must be able to add or delete users to the system and update accordingto the data base.

3.5 Resource

- Patient can get prescription from a certified and valid doctor.
- Patients can be able to view the list of patients diagonised.

3.5.1Software Interface

Front End: Web Browser, Operating System (any)
Web Server: APACHE, Operating System (any)
Data Base Server: MYSQL, Operating System (any)
End Development: eclipse (servlets,jsp,html,css)

3.5.2 Hardware Interface

Soft ware	Processor	RAM	Diskspace
Any browser	Intel Pentium IV at IGHz	512MB	2GB

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Server side			
Apache	Intel Pentium IV at GHz	1GB	2GB
Mysql	Intel Pentium IV at 2.6 GHz	1GB	2GB(Excluding Data size)

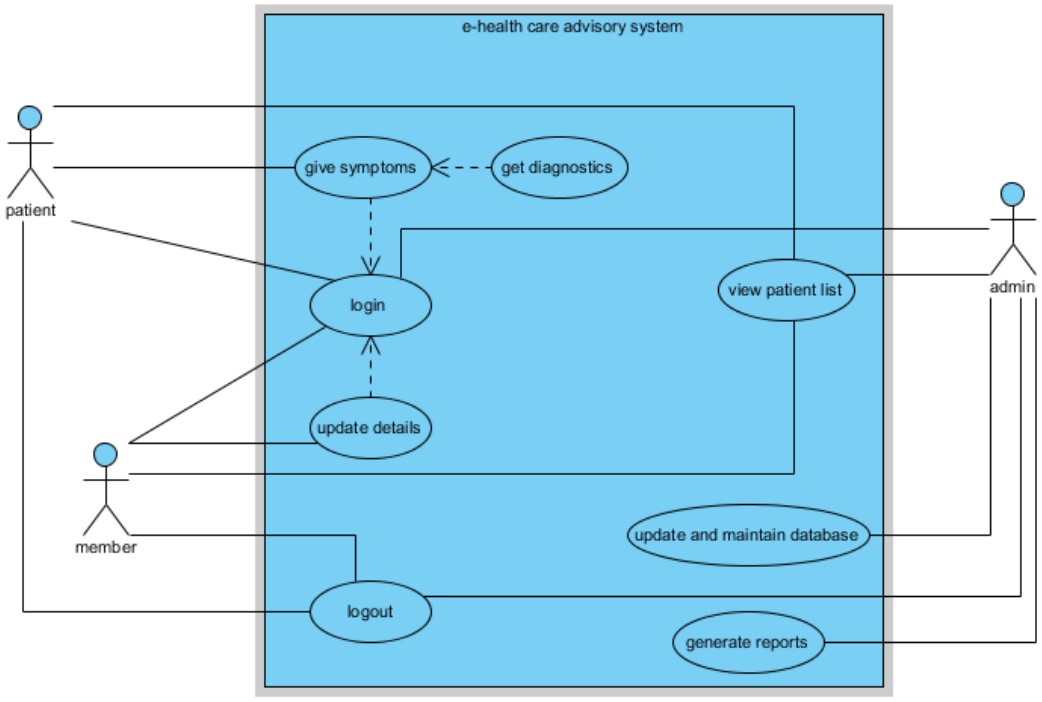
3.5.3 Constraints

Patients, non-members and administrators are only eligible for using this E HEALTH CARE ADVISOR.All the fields should be filled during /login.

4.RESULT&DISCUSSION

4.1 Use Case Diagram

USE-CASE FOR PATIENT, DOCTOR AND ADMIINISTRATOR:



Step 1: In this Figure Consists Mainly Divided into 3 Parts: 1. Patient 2. Member 3. Admin

Step 2: Patient Login and Update the Details.

Step 3: Patient Enter the Symptoms and Get Relevant Description of the Particular Symptom.

Step 4: Member and Admin view the patient list

Step 5: Member Logout and that details send to the Admin

Step 6: Admin Update and Maintain the Database and Generate Reports.

4.2 Sequence Diagram

Time ordering messagesthe sequential steps of data flow UML

1. Flow chart of User Logein

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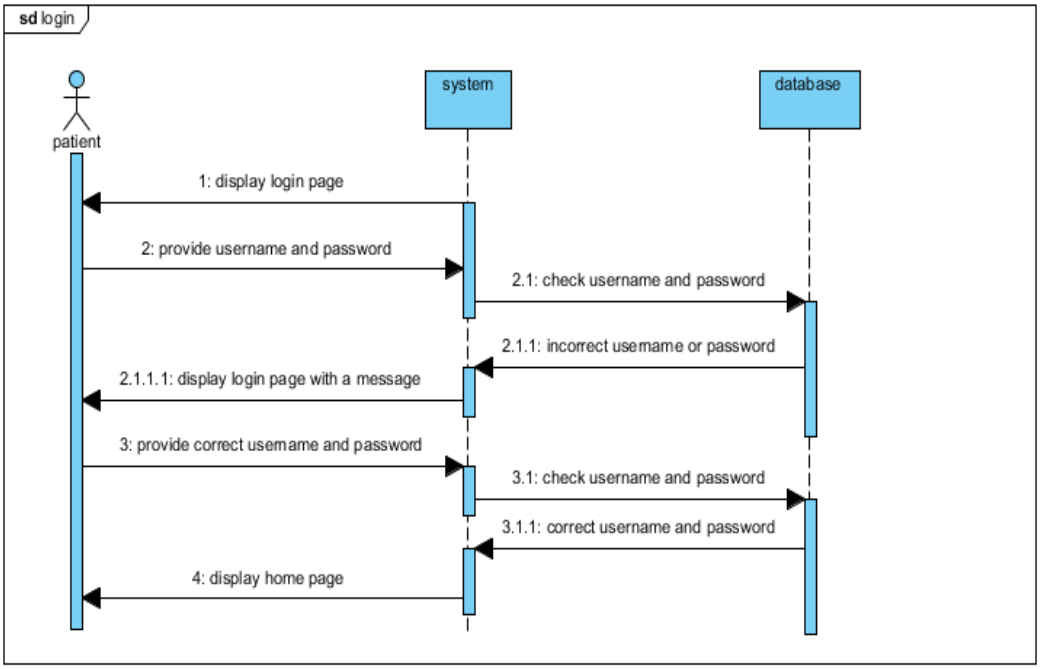

Steps for Sequence Diagram: (Main Roles : System, Patient, Database)

System : Display the Login Page

Patient : Provided Username and Password

System : Checks Username and Password is Correct or Not

Database: sends the Incorrect Username and Password

System : Display login page with Message

Patient: Provide Correct username and Password

System : Username and Password checking
Database: sending of correct Username and Password

System : Display a Home Page

2. SEQUENCE DIAGRAM FOR PATIENT FOR DIAGNOSTICS

Steps (Main Roles: Patient, System, and Database)

Step 1: Patient: Gives Problem or Symptoms

Step 2: System: Check Symptoms in the database

Step 3: Database:add to patient List

Step 4: Database: Retrieve Corresponding Prescription

Step 5: System: Sends the acknowledgement

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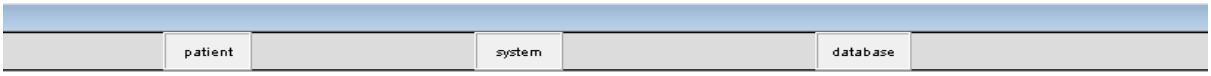
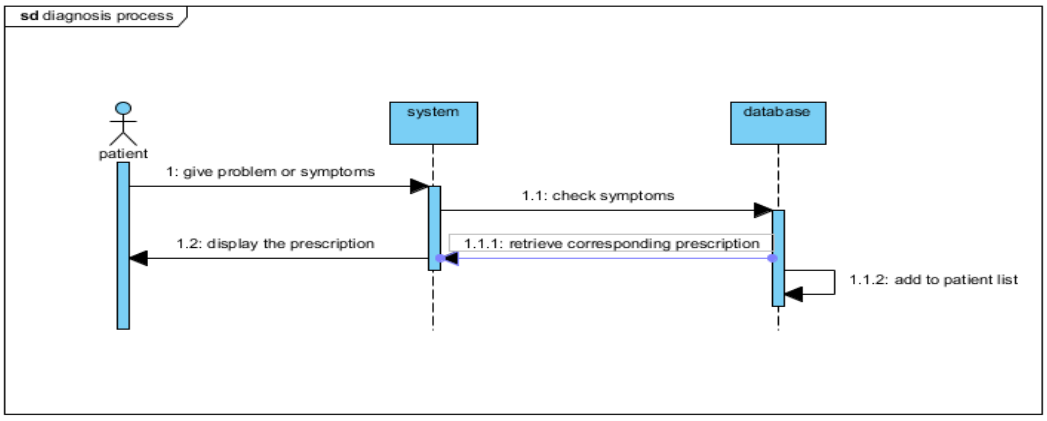




3. SEQUENCE DIAGRAM FOR DOCTOR TO UPLOAD INFORMATION:

Steps (Roles: Doctor, System, and Database)

Step 1: Doctor : Request the update Page

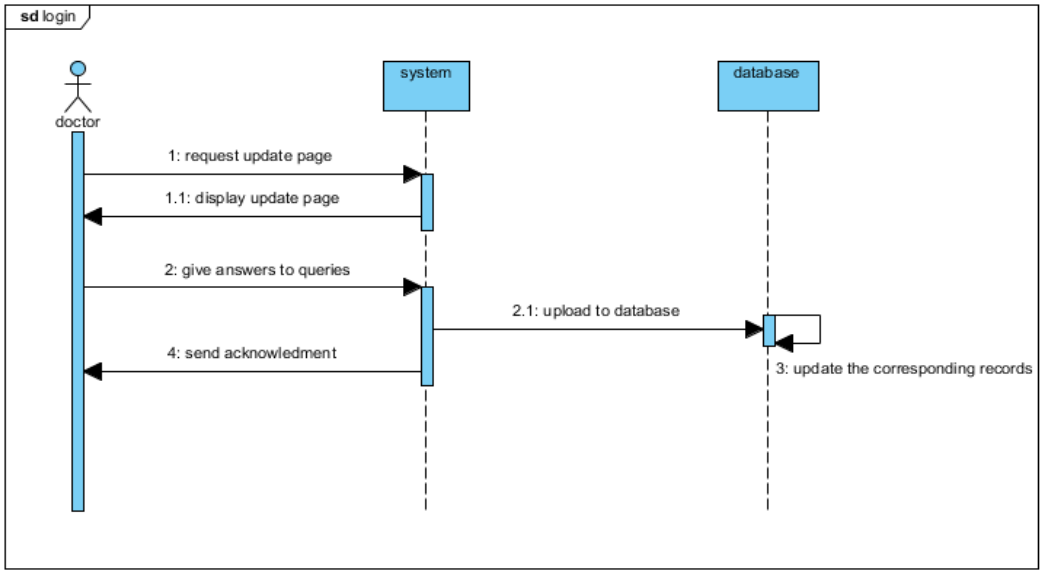
Step 2: System: Displays the update page

Step 3: Doctor : Gives answer to the Queries

Step 4: System : Upload into the Database

Step 5: Database: Update Corresponding records into the Database

Step 6: Database: Sends Acknowledgement report to the Doctor



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4.3 Activity Diagram:User RegistrationSteps for Activity Diagram:

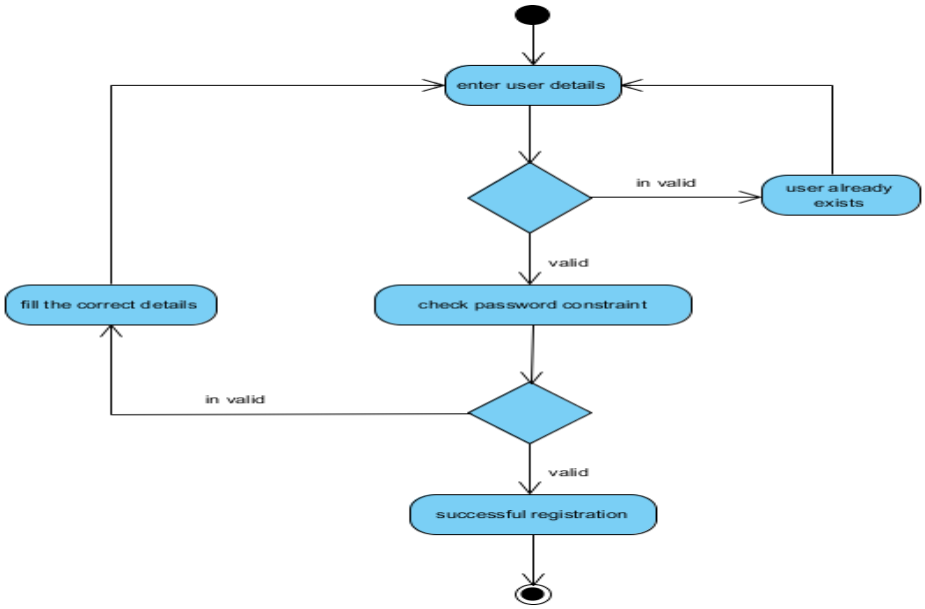
Step 1: Registration.

Step 2: Entry of User details

Step 3: if username is invalid it display a message user is already exists and displays the User details page.

Step 4: if username is Valid check password Constraint.

Step 5: if it is valid Registration it displays a Successful Registration. In case it is in valid display a message fills the correct details and displays the user details page.



USER LOGIN

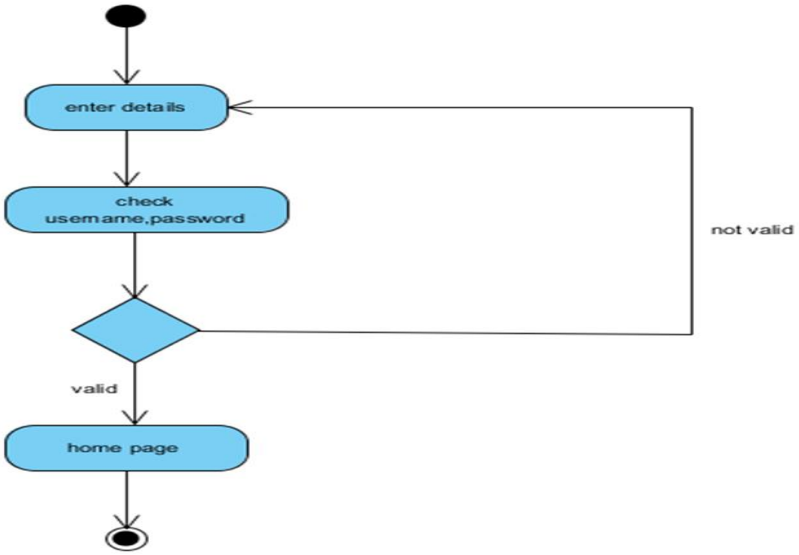
Steps for User Login Page :

Step 1: Starting of Login Page

Step 2: Entry of Details

Step 3: Check Username and Password

Step 4: Valid Username and Password it will displays a Home Page otherwise go to Enter Details Page



PATIENT TREATMENT

Steps for the Patient Treatment:

Step 1: Start the Login Page

Step 2: Entry of Username and Password

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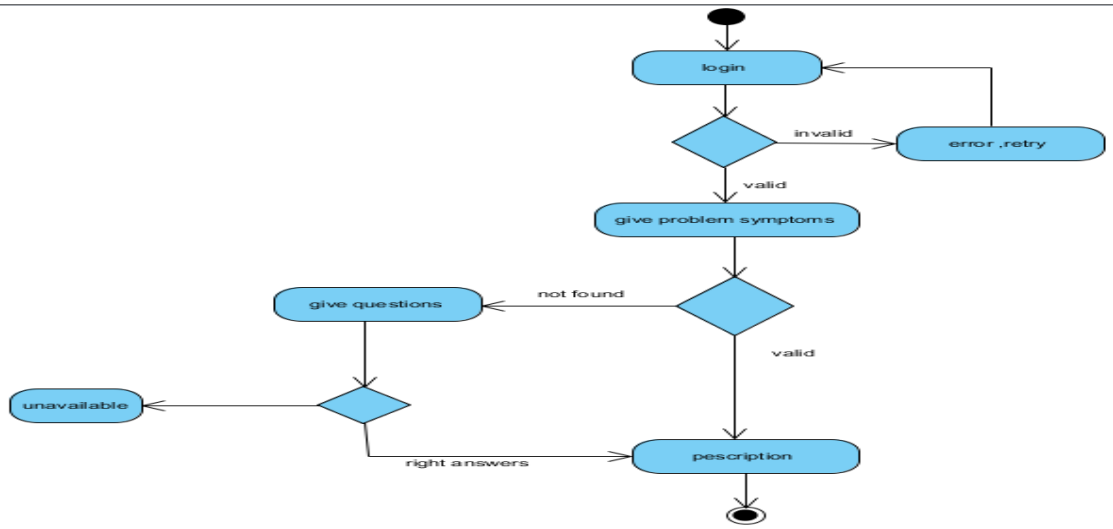
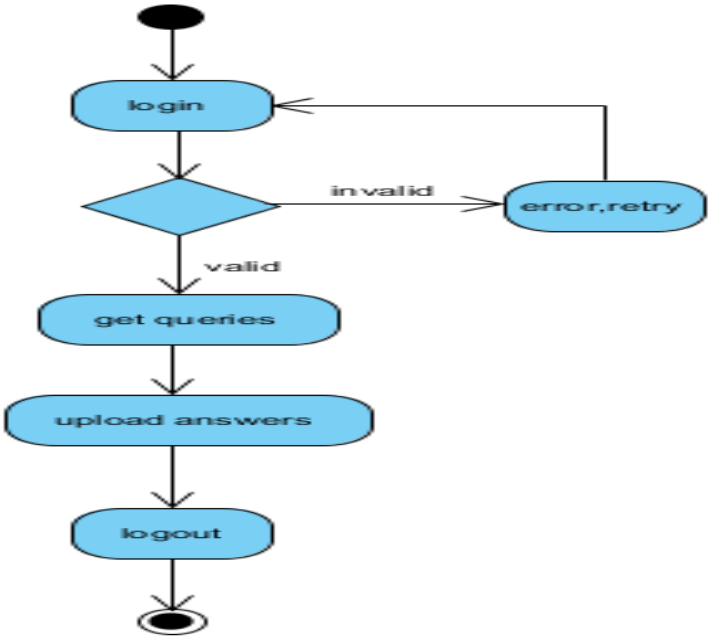
Step 3: Checking of it's Valid Username and Password. if it is un valid go to login page with error message
Step 4: if Username and Password is Valid. Given the Problem Symptoms
Step 5: if it is not valid / not found it will give a questions .if it is valid displayRelevant description of the particular symptom
Step 6: the questions is valid gives Prescription if it is not valid / wrong answer it Will displays the Unavailable



DOCTOR TO UPLOAD INFORMATION
Steps for Doctor to upload Information:
Step 1: Start the Login Page
Step 2: Doctor Entry of Username and Password Details
Step 3: if it is valid get Queries otherwise displaysaerror message and go toLogin Page.
Step 4: once get queries and upload the answers
Step 5: Logout / Exit the Page



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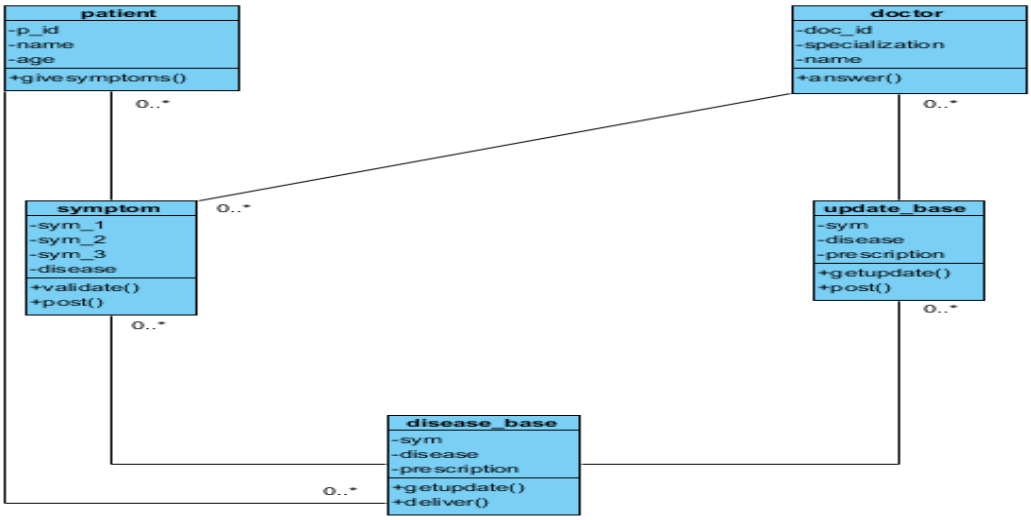
4.4 Class Description figure: type of static structure of UML

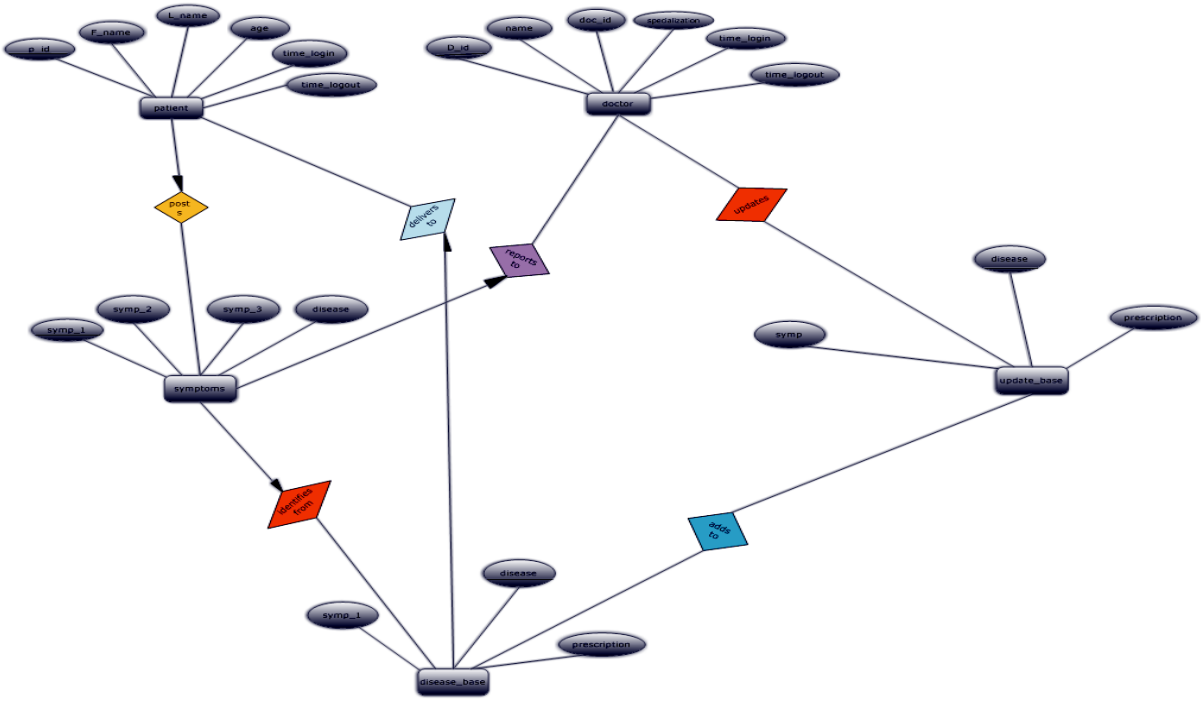


Description of the Diagram:

1. Patient consists Id, Name, age
2. Doctor Consists Doctor Id, Name, Specialization
3. Symptoms Consists Sym1.Sym2, Sym3
4. Update _ base consists Symptoms, Disease, and Prescription
5. Disease _Base consists System, Disease and Prescription

Doctor wants to see the symptoms and update the symptoms, disease and Prescription and wants to go to disease base it consists symptoms, Disease and Prescription displays the Symptoms Prescription and sends the Patient.

4.5 ER Diagram:the step by step processing of **ER**is a specialized graphic that illustrates the relationships between entities in a database.



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