# CHAPTER 1

# INTRODUCTION

In the current globalized society, the increasing development spread of Information Technology and the Internet have led to the creation of distinct ways of communication among users in virtual environments. In this context, the cognitive interfaces provide new forms of interaction between human and machine. The Graphical User Interface (GUI) is based on navigation systems that use (i) hypertext and/or (ii) option selection with buttons/menus. These approaches require an additional cognitive effort by the users, since the natural language is the usual way of communication between humans. Thus, more appropriate cognitive interfaces allow the foundation of dialogues in natural language, and also make the human-machine interaction more attractive and powerful in terms of empathy. A Chabot is a conversational agent where a computer program designed to simulate an intelligent conversation. There are various kinds of conversational agents. But from those agents, AIML (Artificial Intelligence Mark-up Language) based Chatbot are most popular because they are lightweight and easy to configure. ALICE is the most popular AIML based Chatbot which won Leaner Price three times (2000, 2001, and 2004). So, now a days, various kinds of organizations are interested to implement AIML based Chabot to get conversation with customers with minimum configuration and cost.

Artificial Intelligence Mark-up Language (AIML) is derivation of Extensible Mark-up Language (XML). It has class of data object called an AIML object which describes the behaviour of computer programs. It contains of units called topics and categories. Categories are basic unit of knowledge in AIML. Each category consists of pattern which contains input and template which contain answer of chatbot. Besides, there are containing some optional context called "that" and "topic". <that>contain chatbot last utterance and <topic>contain a collection of categories together. Conversational user interface is a software that runs simple and structurally repetitive tasks inside a messaging application. Conversation is a way to share knowledge, emotion and it is part of our communication makeup. Moreover, messaging applications are becoming the new generation of digital product design after the web and mobile application. One reason behind this shift is the simplicity offered by CUIs, compared to web or mobile application. Currently, social or messaging apps are among the most popular apps in the world. However, designing CUI patterns requires personalisation to fit into the application context. There are specific design requirements when working with

chatbot applications. Providing a technology with services that fit with user needs should consider user demographics, chatbot domain, data interaction, dialogue structure and so forth. Recently, Artificial Intelligence (AI) has made considerable progress in various domains, especially after the rise of neural networks and deep learning, and most of this progress is devoted to industry and business cases . One important topic in this rise is designing domain specific conversational interface experiences. CUI design pattern is complicated because conversation comes with many expectations. To meet these expectations, design patterns should be personalised to be applicable into different domains. To achieve optimum customer satisfaction, it is important to study the design aspect of the product (e.g., simplicity, efficiency, decrease frictions). The current state of conversational interface is limited in terms of established user interface design patterns. Available studies focus mainly on designing conversation agents and handling task automation. Only few works have discussed design patterns for specific chatbot application domains, and they mainly remained in the scientific literature. There has not been deep analysis and empirical discussion of specific design elements and techniques in CUI, or highlighting issues and challenges accompanying the design pattern. A standard approach is indeed required to follow when working with CUI design patterns. This includes the available design approaches and techniques and what to consider when applying them during application design and development. For example, it is unclear when bots should be text or button based, or which the best practices when designing a bot conversation are (e.g. welcome message, conversation style, message length, etc.). However, the big question remains how to use this new medium to build great user experience. Users point of view, their needs, what motivates them to seek the bot and how to create unique CUIs for users and domain, matter when designing CUIs. As with any field of study, evolution takes place in terms of breakthrough or developmental research leading to advancement and friendly usability of that specific technology. Problems from different areas have been successfully solved using Artificial Intelligence algorithms

Artificial Intelligence is based on how any device perceives its Environment and takes actions based on the perceived data to achieve the result successfully. It is the study of intelligent agents. The term "artificial intelligence" is applied when a machine mimics "cognitive" functions that humans associate with other human minds, such as "learning" and "problem solving. Artificial Intelligence gives the supreme power to mimic the human way of thinking and behaving to a computer. chatbot is being used in the dialog system. Mostly chatbots uses natural language processing for interpreting the user input and generating the corresponding response but certain simpler systems searches for the keyword within the text

and then provides a reply based on the matching keywords or certain pattern. Chatbot's are such kind of computer programs that interact with users using natural languages. For all kind of chatbots the flow is same, though each chatbot is specific in its own area knowledge that is one input from human is matched against the knowledge base of chatbot. Chatbot's work basically on Artificial intelligence, so using this capability we have decided to add some contribution to the Health Informatics The aim of this system is to replicate a person's discussion. The development of chatbot application can be done with making a user interface to send input and receive response. It is a system that interact with user by keeping the track of the state of interaction and recollecting the preceding commands to give functionality

The system give response by use of an efficient Graphical User Interface such that if actual person is chatting with the user. chatterbot that can be used in various fields like education, healthcare, and route assistance[8]The central part of the chat-bots includes MySQL. It is an interactive system solve users query regarding medicine. so they can get correct guidance for treatment through android app by using Google API.

## 1.1  Problem Definition

Mechanism for prescribing drugs in hospital and its or its substitute availability in the medical shops of the area city.  believes that the  medicine should approach each patients illness as unique, with medication tailored to the persons history and biology. This approach to medical practice is known as Personalized or Precision Medicine The high cost of our healthcare system can often be attributed to the lack of patient engagement after they leave clinics or hospitals. Various surveys in this area have proved that that chatbot can provide healthcare in low costs and improved treatment if the doctors and the patient keep in touch after their consultation. To answer the questions of the user chatbot is used. There is very less number of chatbots in medical field Today the most of the people can not judge which medicine we have to take with cheap cost and that can be take from nearest shop

The proposed system provides a text-to-text conversational agent that asks the user about medicine. The user can chat as if chatting with a human. The bot then ask the user a series of questions about their option regarding the medicine. It gives suggestions about the different medicine with same ingredients

The medical chat-bots can be developed by using artificial algorithms that scrutinize user's queries and recognize it and give reply to related query. The medical chat-bots functioning depends on Natural language processing that helps users to submit their problem about the cheap medicine with same ingredients that the user wants

This system helps users to submit their complaints and queries regarding the health medicine. Customer satisfactions the major concern for developing this system. The actual welfare of the chatbot is the facilitate the people by giving proper guidance regarding the good and healthy living.

Normally Users are not aware about different types of medicine with having the same ingredients regarding the particular disease. For small problem user have to go personally to the hospital for check-up the medicine which is more time consuming. Also handling the telephonic calls for the complaints is quite hectic. Such a problem can be solved by using medical Chat Bot by giving proper guidance regarding healthy living.

This medibot is also helps the user to reduce the burden of searching the shops for a best and lowcost medicine with the same ingredient that doctor has been given to him

## 1.2 Motivation/Reasons behind selecting the topic

- It is often seen that patient has to visit several medical shops to fetch the prescribed medicines as he is unaware of different options for a drug available to him. It is often seen that patient has to visit several medical shops to fetch the prescribed medicines as he is unaware of different options for a drug salt available to him.

## 1.3 Advantages of the proposed system:

- It is convenient for the patients to know about the alternatives available for the same medicine in the medical shops near him.

- Chat bots broadly are used for the intelligent assistant applications. In common, they generate responses from the user's input.

- Talking to a bot feels like talking to person.

- There is no need to install a separate application to use chatbot, hence it saves storage space in device.

## 1.4Applications of the proposed system over existing system:

Applications can be developed wherein the prescription from the doctor/hospital is digitalized and directly transferred to patients or caretaker who can access through website to assess the options and availability of the drug in the vicinity or city. Some chatbots are compact medical reference books which are useful not only for patients, doctors etc but also for those who want to learn something about health. The user feels that they are incorporated in the process of their health. Patients who feel included, who are interacting through chatbots with the healthcare system, will stay with the system, and that is important for them and the healthcare provider. The old chatbot are client communications systems and their best effort is a question and answer page on a website. Bot can facilitate to get the medicine related question and provide the all cost of medicine without a human interference.

This system helps users to submit their complaints and queries regarding the medicine. Customer satisfactions the major concern for developing this system. The actual welfare of the chatbot is the facilitate the people by giving proper guidance regarding the good and healthy living.

# CHAPTER 2

# LITERATURE SURVEY

[1] Md. Shahriare Satu, Md. Hasnat Paves, Shamim-AI-Mamun This Author proposed on the applications which are used in AIML chatbot for their conversational service. These applications are related to cultural heritage, e-learning, e-government, web base model, dialog model, semantic analysis framework, interaction framework, humorist expert, network management, adaptive modular architecture as well.

[2] Dongkeon Lee, Kyo-Joong Oh, Ho-Jin Choi Author in this paper focusses on chatbot application which provides conversational mental healthcare service based on emotion recognition methods and chat assistant platform which consist of the context sensitive advanced natural language-based technique to provide personalized response generation continuously.

[3] D. De Orlando and F. Giovanni, Author of this paper proposed an integrated platform consists of basic AIML knowledge, PABX (Private Automated Branch exchange) for VoIP phone management and Servers Control daemon. In this case, chatbot is called Tutorbot because it isfunctionality backing of didactics done in e-I earning environments.

[4] A. Augello, A. Santangelo, S. Sorce, G. Pilato, A. Gentile, A. Genco, and S. Gaglio, The main idea of this Author is on Core of the system is a conversational agent which is able to talk to tourist in natural languages. It is based on two main parts: chatbot module and multimodal interface.

[5] S. du Preez, M. Lall, and S. Sinha Author here focuses on Web-based system which use intelligent voice recognition capabilities and black box approaches. It controls communication structure with web service and consists of three components: client, server, content acquisition. The server is a simple object access protocol (SOAP) aware internet application which isolates client from interacting inner workings. All messages are formatted in an XML and encapsulated in SOAP text based message pack.

[6] Simon Hoermann discuss the current evidence for the feasibility and effectiveness of online one-on-one mental health interventions that use text-based synchronous chat. Synchronous written conversations (or "chats") are becoming increasingly popular as Web-based mental health interventions. This review is based on an evaluation of individual

synchronous Web-based chat technologies. Through the current evidence of the application of this technology, the tentative support for mode of intervention is seen. Interventions utilizing text-based synchronous communication showed better outcomes compared with Waitlist conditions and overall equivalent outcomes compared with Treatment As usual, and were at least as good as the comparison interventions.

[7] Saurav Kumar Mishra says that the chatbot will act as a virtual doctor and makes possible for the patient to interact with virtual doctor. Natural language processing and pattern matching algorithm for the development of this chatbot. Based on the survey given it is found that the no of correct answer given by the chatbot is 80% and incorrect/ambiguous answer given is 20%From this survey of chatbot and analysis of result suggested that this software can be used for teaching and as a virtual doctor for awareness and primary care.

[8] Hameedullah Kazi describes the development of a chatbot for medical students, that is based on the open source AIML based Chatterbean. The AIML based chatbot is customized to convert natural language queries into relevant SQL queries.

## CHAPTER 3

# SYSTEM REQUIREMENTS AND SPECIFICATION

### 3.1 Functional Requirements:

Preparation of drug dataset.

Mapping of drug salt to medicines.

Implementing chatbot to answer queries of the user using Natural Language Processing (NLP).

Showing nearby medical shops with availability of medicines.

Integration of  chatbot into website.

Integration of chatbot into various messenger platforms like face book, Skype.

- Preparation of drug dataset.

- Mapping of drug to medicines.

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- Showing nearby medical shops with availability of medicines.

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- Integration of chatbot into various messenger platforms like facebook ,  skype.

## 3.2 Non-functional Requirements:

Chat application must be installed.

Internet connection is required.

- Chat application must be installed.

- Internet connection is required.

Bot should reply within seconds to user's queries

### 3.3 User Interface Requirements:

Web based, dialog based, chat based.

Web based browser like chrome.

Use of Chabot

Professional look and feel

It is the interface that accept input and provide output by generating web pages which are transmitted via the Internet and viewed by the user using a web browser program .

## 3.4 Hardware requirements:

- Cloud Server.
- Processor:    PETIUM IV  PROCCESSOR
- Ram:   Min 4GB MB RAM
- Hard Disk:     Min 80GB OF HARDDISK

## 3.5 Software requirements:

1) MVC Frame Work CakePHP
2) Bootstrap Framework.
3) JQUERY AND AJAX BASED REST API Communication.
4) WAMP SERVER.
5) PHP.
6) MYSQL.
7) AIML
8) JSON

## Technologies Used:

 AIML Messenger

## Tools Used:

Notepad++, web browser.

# CHAPTER 4

# SHORT DESCRIPTION OF SOFTWARE REQUIREMENTS USED

## *CakePHP*

- It is an open source MVC framework.
- It makes developing, deploying and maintaining applications   much easier.
- CakePHP has number of libraries to reduce the overload of most common tasks.

Following are the advantage of using CakePHP.

1) Open Source

2) MVC Framework

3) Libraries and Helpers

4) Built-in Validation

5) Search Engine Friendly URLs

6) Easy CRUD (Create, Read, Update, Delete) Database Interactions.

7) View Helpers for AJAX, JavaScript, HTML Forms and More

## 4.1 MVC MODEL in details

## 1.The Model layer

The Model layer represents the part of your application that implements the business logic. It is responsible for retrieving data and converting it into meaningful concepts for your application. This includes processing, validating, associating or other tasks related to handling data.At a first glance, Model objects can be looked at as the first layer of interaction with any database you might be using for your application. But in general they stand for the major concepts around which you implement your application.

Example->In the case of a social network, the Model layer would take care of tasks such as saving the user data, saving friends' associations, storing and retrieving user photos, finding suggestions for new friends, etc.

## 2. The View layer

The View renders a presentation of modelled data. Being separated from the Model objects, It is responsible for using the information it has available to produce any presentational interface Your application might need.The View layer is not only limited to HTML or text representation of the data. It can be used to deliver a wide variety of formats depending on your needs, such as videos, music, documents and any other format you can think of.

For example, as the Model layer returns a set of data, the view would use it to render a HTML page containing it, or a XML formatted result for others to consume.

## 3.The Controller layer

The Controller layer handles requests from users. It is responsible for rendering a response with the aid of both the Model and the View layer. A controller can be seen as a manager that ensures that all resources needed for completing a task are delegated to the correct workers. It waits for petitions from clients, checks their validity according to authentication or authorization rules, delegate's data fetching or processing to the model, selects the type of presentational data that the clients are accepting, and finally delegates the rendering process to the View layer.
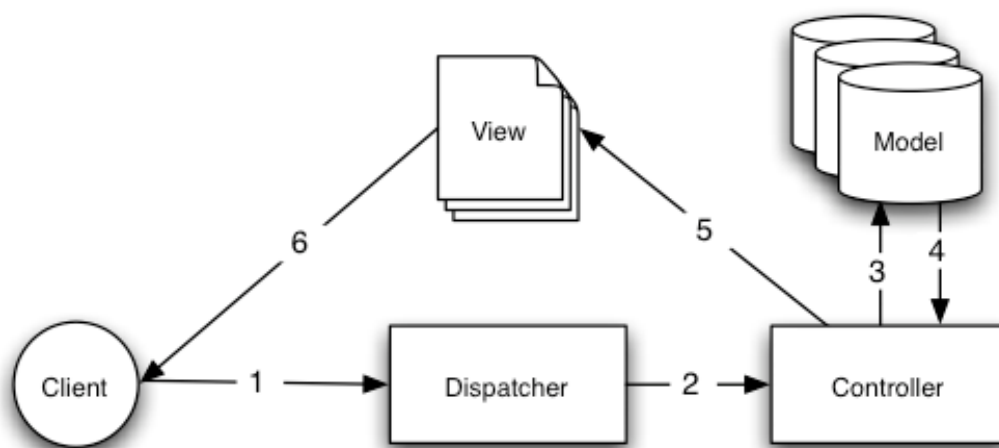
**Fig CakePHP request cycle**

## 4.2 PROGRAMMING TOOL

## JQuery

jQuery is a fast and concise JavaScript Library created by John Resig in 2006 with a nice motto: Write less, do more. jQuery simplifies HTML document traversing, event handling, animating, and Ajax interactions for rapid web development. jQuery is a JavaScript toolkit designed to simplify various tasks by writing less code. Here is the list of important core features supported by jQuery:

- DOM manipulation: The jQuery made it easy to select DOM elements, negotiate them and modifying their content by using cross-browser open source selector engine called Sizzle.
- Event handling: The jQuery offers an elegant way to capture a wide variety of events, such as a user clicking on a link, without the need to clutter the HTML code itself with event handlers.
- AJAX Support: The jQuery helps you a lot to develop a responsive and feature-rich site using AJAX technology.
- Animations: The jQuery comes with plenty of built-in animation effects which you can use in your websites.
- Lightweight: The jQuery is very lightweight library - about 19KB in size (Minified and gzipped).
- Cross Browser Support: The jQuery has cross-browser support, and works well in IE 6.0+, FF 2.0+, Safari 3.0+, Chrome and Opera 9.0+
- Latest Technology: The jQuery supports CSS3 selectors and basic XPath syntax

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- JQuery can be used to develop Ajax based applications.
- It can be used to make code simple, concise and reusable.
- It simplifies the process of traversal of HTML DOM tree.
- It can also handle events, perform animation and add Ajax support in web applications.

## AJAX

AJAX stands for **A**synchronous **Ja**vaScript and **X**ML. AJAX is a new technique for creating better, faster, and more interactive web applications with the help of XML, HTML, CSS, and Java Script. AJAX stands for Asynchronous JavaScript and XML. AJAX is a new technique for creating better, faster, and more interactive web applications with the help of XML, HTML, CSS, and Java Script.

- Ajax uses XHTML for content, CSS for presentation, along with Document Object Model and JavaScript for dynamic content display.

- Conventional web applications transmit information to and from the sever using synchronous requests. It means you fill out a form, hit submit, and get directed to a new page with new information from the server.

- With AJAX, when you hit submit, JavaScript will make a request to the server, interpret the results, and update the current screen. In the purest sense, the user would never know that anything was even transmitted to the server.

- XML is commonly used as the format for receiving server data, although any format, including plain text, can be used.

- AJAX is a web browser technology independent of web server software.

- A user can continue to use the application while the client program requests information from the server in the background.

- Intuitive and natural user interaction. Clicking is not required, mouse movement is a sufficient event trigger.

- Data-driven as opposed to page-driven.

- Rich Internet Application Technology AJAX is the most viable Rich Internet Application (RIA) technology so far. It is getting tremendous industry momentum and several tool kit and frameworks are emerging. But at the same time, AJAX has browser incompatibility and it is supported by JavaScript, which is hard to maintain and debug.

- AJAX is Based on Open Standards AJAX is based on the following open standards:

- Browser-based presentation using HTML and Cascading Style Sheets (CSS).

- Data is stored in XML format and fetched from the server.

- Behind-the-scenes data fetches using XMLHttpRequest objects in the browser.

- JavaScript to make everything happen.

AJAX cannot work independently. It is used in combination with other technologies to create interactive webpages.

- JavaScript ☐ Loosely typed scripting language. ☐ JavaScript function is called when an event occurs in a page. ☐ Glue for the whole AJAX operation.
- DOM ☐ API for accessing and manipulating structured documents. ☐ Represents the structure of XML and HTML documents.
- CSS ☐ Allows for a clear separation of the presentation style from the content and may be changed programmatically by JavaScript.
- XMLHttpRequest ☐ JavaScript object that performs asynchronous interaction with the server.
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## HTML

HTML stands for Hypertext Markup Language, and it is the most widely used  languageto write Web Pages. Hypertext refers to the way in which Web pages (HTML documents) are linked together. Thus, the link available on a webpage is called Hypertext.

Originally, HTML was developed with the intent of defining the structure of documents like headings, paragraphs, lists, and so forth to facilitate the sharing of scientific information between researchers.

Now, HTML is being widely used to format web pages with the help of different tags available in HTML language.

HTML is a language; this accepts set of tags which are called as HTML tags or HTML elements. The forms in HTML are used to add the form controls. This form controls include the text box ,buttons ,check box ,radio buttons etc. The forms are used to accept the input from the user.

As told earlier, HTML is a markup language and makes use of various tags to format the content. These tags are enclosed within angle braces <Tag Name>. Except few tags, most of the tags have their corresponding closing tags. For example, <html> has its closing tag</html> and <body> tag has its closing tag </body> tag etc.

## CSS (Cascading   Style Sheet)

Cascading Style Sheets, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable. CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, as well as a variety of other effects. CSS is easy to learn and understand but it provides a powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML or XHTML

CSS is usually used to designing of a web page. There are 3 types of CSS namely

- ✓ External CSS: It is most widely used. This CSS where the HTML and the CSS files both are different formats i.e. the HTML code is written and CSS called as a  link.

- ✓ Internal CSS: hear the HTML and CSS both are in same file to use this internal style sheet we need to put all the styles within<style>which must be inside the <head>

- ✓ Inline style sheet: This is a type of CSS where the style is applied for single line here the style acts like an attribute.

## MySQL

 Introduction to MySQL by showing how to use the mysql client program to create and use a simple database. mysql (sometimes referred to as the "terminal monitor" or just "monitor") is

an interactive program that enables you to connect to a MySQL server, run queries, and view the results. mysql may also be used in batch mode: you place your queries in a file beforehand, then tell mysql to execute the contents of the file

MySQL is the most popular open source relational database management system (RDBMS) being used for developing web based applications.

- ✓ MySQL can execute queries against a database.

- ✓ MySQL can retrieve the data from the database.

- ✓ MySQL can insert, search, update and delete records from the database

- ✓ MySQL can create new database and add tables in the database.

## PHP

PHP Stands for Hyper Text Preprocessor which is widely used open source scripting language.PHP can also be a programming language, if not merged with Javascript. These php codes are always executed on the server side so the codes cannot be viewed by the user during the run time, whereas the HTML and JavaScript codes can be viewed.

- PHP started out as a small open source project that evolved as more and more people found out how useful it was. Rasmus Lerdorf unleashed the first version of PHP way back in 1994.
- PHP is a recursive acronym for "PHP: Hypertext Preprocessor".
- PHP is a server side scripting language that is embedded in HTML. It is used to manage dynamic content, databases, session tracking, even build entire e-commerce sites.
- It is integrated with a number of popular databases, including MySQL, PostgreSQL, Oracle, Sybase, Informix, and Microsoft SQL Server.
- PHP is pleasingly zippy in its execution, especially when compiled as an Apache module on the Unix side. The MySQL server, once started, executes even very complex queries with huge result sets in record-setting time.
- PHP supports a large number of major protocols such as POP3, IMAP, and LDAP. PHP4 added support for Java and distributed object architectures (COM and CORBA), making n-tier development a possibility for the first time.

- PHP is forgiving: PHP language tries to be as forgiving as possible.

- PHP Syntax is C-Like.

- Common Uses of PHP PHP performs system functions, i.e. from files on a system it can create, open, read, write, and close them. The other uses of PHP are:

- PHP can handle forms, i.e. gather data from files, save data to a file, thru email you can send data, return data to the user.

- You add, delete, modify elements within your database thru PHP.

- Access cookies variables and set cookies.

- Using PHP, you can restrict users to access some pages of your website.

- It can encrypt data.

- ✓ PHP can generate dynamic  page content

- ✓ PHP can create, open, read, write and close files on the server.

- ✓ PHP can collect data

- ✓ PHP can add, modify, search and delete the data from table dynamically

- ✓ PHP can restrict users to access some pages on your website.

## Java Script

Java script is a clientside scripting language which is light weight and can be easily integrated with JAVA PHP, and ASP etc. This Java script is an open source and cross platform language. Validation  will be done here.

## BOOTSTRAP

Framework for HTML and CSS means it contains classes where CSS has been added Bootstrap is a sleek, intuitive, and powerful, mobile first front-end framework for faster and easier web development. It uses HTML, CSS, and Javascript.  Bootstrap was developed by Mark Otto and Jacob Thornton at Twitter. It was released as an open source product in August 2011 on GitHub.

## WAMP

WAMP is an acronym that stands for Windows, Apache, MySQL, and PHP. It's a software stack which means installing WAMP installs Apache, MySQL, and PHP on your operating system (Windows in the case of WAMP) .It is a local host server whenever we design a website we will be hosting it on the server.

WAMP is a Windows OS based program that installs and configures Apache web server, MySQL database server, PHP scripting language, phpMyAdmin (to manage MySQL database's), and SQLiteManager (to manage SQLite database's). WAMP is designed to offer an easy way to install Apache, PHP and MySQL package with an easy to use installation program instead of having to install and configure everything yourself. WAMP is so easy There are usually two reasons why someone chooses to install WAMP. They are looking to install WAMP for development purposes or to run their own server.

## Wamp server contains

### 1-PHP Admin

Alows you to change or add users and for making new databasesphpMyAdmin is a free software tool written in PHP, intended to handle the administration of MySQLover the World Wide Web. phpMyAdmin supports a wide range of operations with MySQL. The most frequently used operations are supported by the user interface (managing databases, tables, fields, relations, indexes, users, permissions, etc), while you still have the ability to directly execute   any mysql statement

**Fig 1.1 login page of phpMyAdmin**
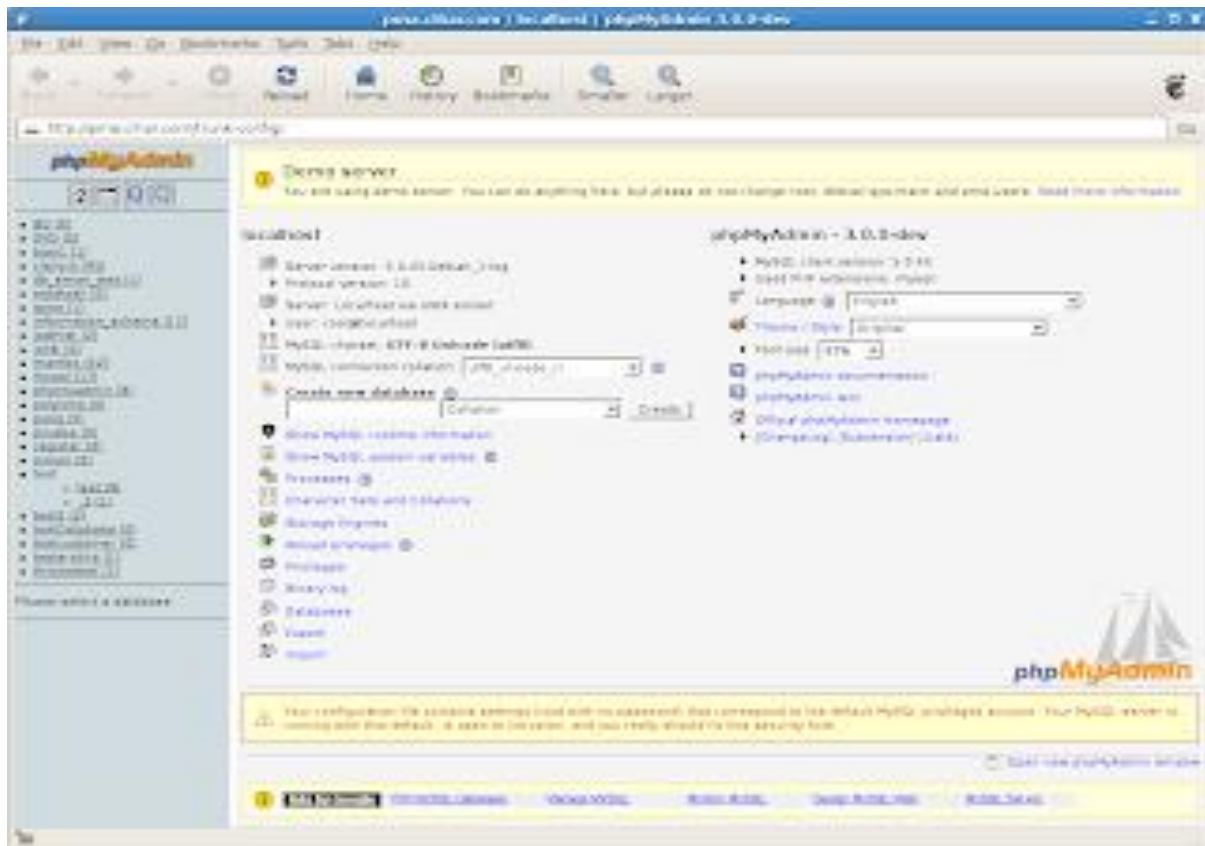
**Fig description of database**

**Features**

- Intuitive web interface

- Support for most MySQL features:

- browse and drop databases, tables, views, fields and indexes

- create, copy, drop, rename and alter databases, tables, fields and indexes

- maintenance server, databases and tables, with proposals on server configuration

- execute, edit and bookmark any SQL-statement, even batch-queries

- manage MySQL users and privileges

- manage stored procedures and triggers

- Import data from CSV and SQL

Export data to various formats: CSV, SQL, XML, PDF, ISO/IEC 26300 - OpenDocument Text and Spreadsheet, Word, L$^A$T$_E$X and others

- Administering multiple servers

- Creating PDF graphics of your database layout

- Creating complex queries using Query-by-example (QBE)

- Searching globally in a database or a subset of it

- Transforming stored data into any format using a set of predefined functions, like displaying BLOB-data as image or download-link

- And much more...

## 2-Apache

Apache Server deals with Server Side Includes, usually called simply SSI. In this article, I'll talk about configuring your server to permit SSI, and introduce some basic SSI techniques for adding dynamic content to your existing HTML pages.

In the latter part of the article, we'll talk about some of the somewhat more advanced things that can be done with SSI, such as conditional statements in your SSI directive

SQL Server is a relational database management system  from Microsoft that's designed for the enterprise environment.  SQL Server runs  on T-SQL (Transact -SQL), a set of programming extensions from Sybase and Microsoft that add several features to standard SQL, including transaction control, exception and error handeling, row processing, and declared variables.
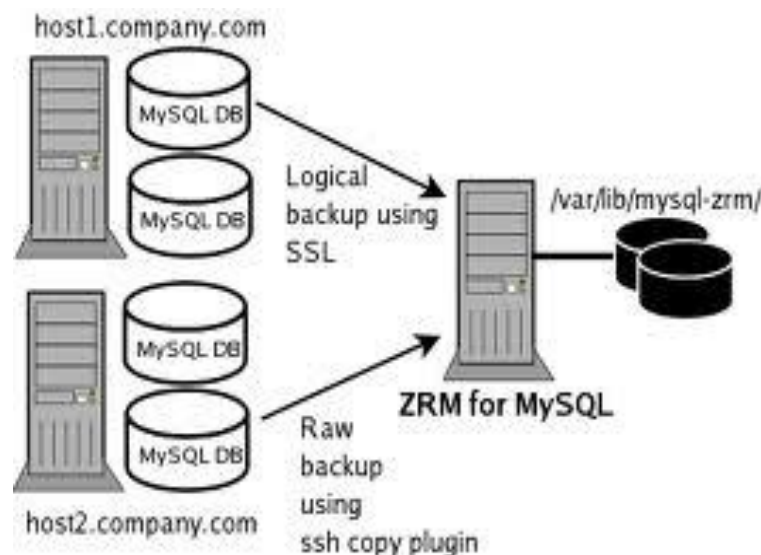


**Fig company database management**

Generically, any database management system (DBMS) that can respond toqueries from client machines formatted in the SQL language. When capitalized, the term generally refers to either of two database management products from Sybase and Microsoft. Both companies offer client-serverDBMS products called SQL Server.

## JSON

- JSON or JavaScript Object Notation is a lightweight text-based open standard designed for human-readable data interchange. Conventions used by JSON are known to programmers, which include C, C++, Java, Python, Perl, etc.
- JSON stands for JavaScript Object Notation.
- The format was specified by Douglas Crockford.
- It was designed for human-readable data interchange.
- It has been extended from the JavaScript scripting language.
- The filename extension is .json.
- JSON Internet Media type is application/json.
- The Uniform Type Identifier is public.json.

### Characteristics of JSON

- JSON is easy to read and write.
- It is a lightweight text-based interchange format.
- JSON is language independent

JSON or JavaScript Object Notation is a lightweight text-based open standard designed for human-readable data interchange. Conventions used by JSON are known to programmers, which include C, C++, Java, Python, Perl, etc.

## Uses of JSON

- It is used while writing JavaScript based applications that include browser extensions and websites.

- JSON format is used for serializing and transmitting structured data over network connection.

- It is primarily used to transmit data between a server and web applications.

- Web services and APIs use JSON format to provide public data.

- It can be used with modern programming languages.

## AIML

AIML stands for **Artificial Intelligence Mark-up Language**. AIML was developed by the Alicebot free software community and Dr. Richard S. Wallace during 1995-2000. AIML is used to create or customize Alicebot which is a chat-box application based on A.L.I.C.E. (Artificial Linguistic Internet Computer Entity) free software.

Some AIML tags are :

- **<Aim>** tag signifies start of the AIML document.

- **<Category>** tag defines the knowledge unit.

- **<Pattern>** tag defines the pattern user is going to type.

- **<template>** tag defines the response to the user

Following are some of the other widely used AIML tags. We'll be discussing each tag in detail in the following chapters.

- **<star>** Used to match wild card * character(s) in the <pattern> Tag.
- **<srai>** Multipurpose tag, used to call/match the other categories.
- **<random>** used to get random responses.
- **<li>** Used to represent multiple responses.
- **<set>** Used to set value in an AIML variable.
- **<get>** Used to get value stored in an AIML variable.
- **<that>** Used in AIML to respond based on the context.
- **<topic>** Used in AIML to store a context so that later conversation can be done based on that context.
- **<think>** Used in AIML to store a variable without notifying the user.
- **<condition>** Similar to switch statements in programming language. It helps ALICE to respond to matching input.

# CHAPTER 5

## MODULES INVOLVED

1) **Registration module**: chemist has to register with username and password.

2) **Login module**: After chemist registration he has to login with his/her username and password. Admin can login with specific username and password.

3) **Authentication module**: once the chemist login he cannot access. Website. Authentication has to be provided by the admin.

4) **Admin dashboard**

    i)     crud(CREATE, READ, UPDATE, DELETE) medicines module: here admin can create new medicine name add ingredients add shops add stocks he can create read it update it anytime and delete.

    ii)     Crud chemist module: here chemist can create read update delete medicine stocks.

5) **Chatbot module**: it is conversational agent users can ask questions Chabot will respond immediately it uses AIML language.

# CHAPTER 6

# 6.1 USE CASE DIAGRAM
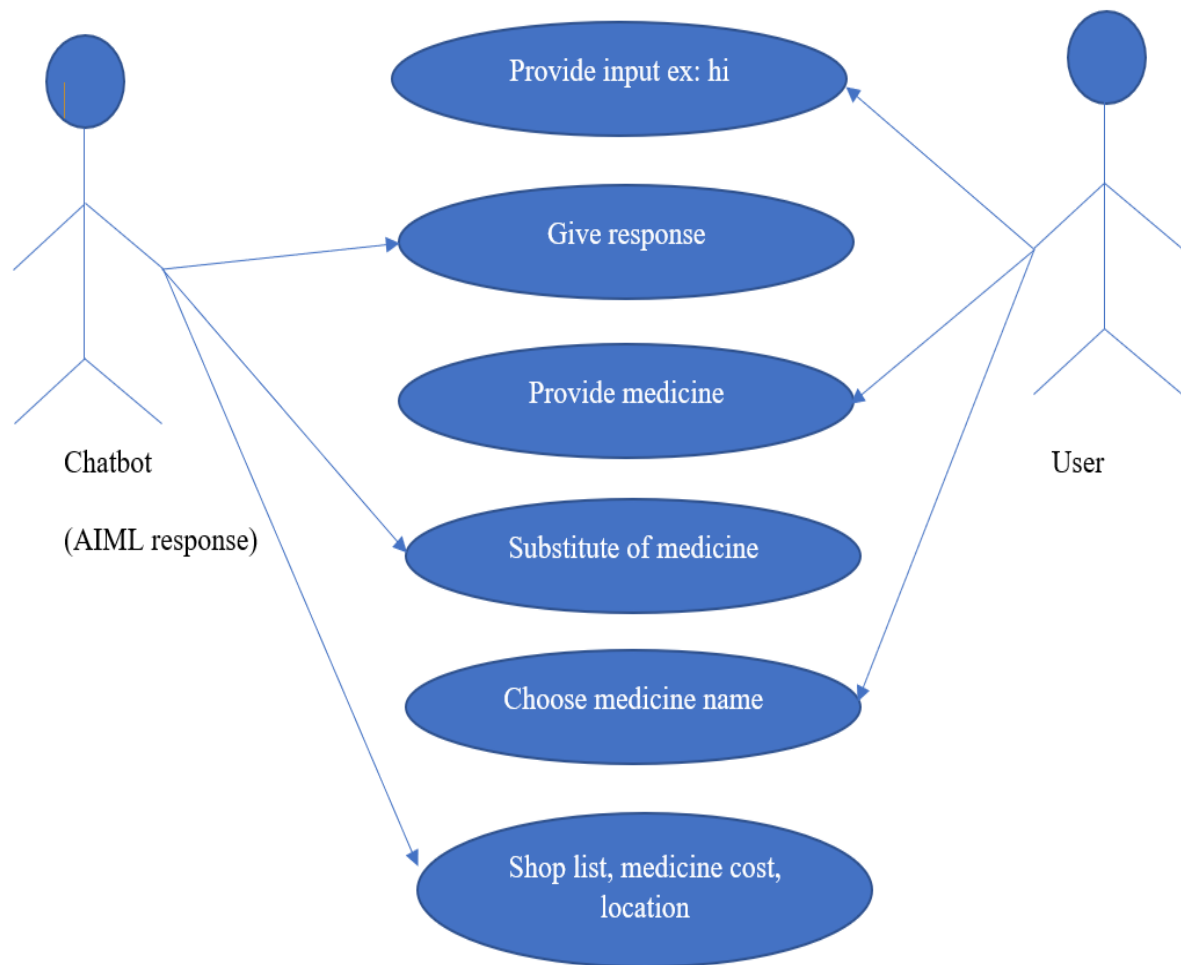


**Figure :relationship between chatbot and user**

- ➢ The above figure describes the conversation between user and chatbot.
- ➢ User starts the conversation with providing the input according to the keywords which are specified in the bot database which we have included in our AIML.
- ➢ Depending on the input provided by the user the bot will response as shown in the figure.
- ➢ Before sending the request of the medicine user should start with help keyword, if not then it will accept simply as conversation.

# CHAPTER 7

# SYSTEM DESIGN AND IMPLEMENTATION

This system is design with conversation between user and the chat bot (AIML) in this system the users interact with the chatbot for taking the suggestion regarding to the medicine with low cost and the shop of that medicine nearby him.

In this system two database are created one is bot.sql another one is medibot.sql which contain the tables such as shop, medicine, ingredients, user and here the medicines and ingredients are linked with each other these all tables are specified with unique id it means every tables have its own id in the bot.sql database AIML table is there which contain all the keyword that can be used by user for interacting with the chatbot

Home page consist of login, about us, chemist registration here admin can logged into with specific user name and password he can maintain all the record of the medicine that can be entered by number of chemists

Whenever a new chemist wants to add his medicine information like cost of the medicine, stock of the medicine he should first do the registration and admin will enable him by making the verification number as 1 from 2

After that the chemist can login with his user name and password many numbers of chemist can add their information

The users.directly interact with chatbot by sending the message for example hi after that the chat bot will respond here user start the conversation regarding the suggestion of low cost medicine it first type help keyword which is a pattern stored in the AIML

We are implementing this on localhost server that is wamp sever the reason behind using of this wamp is to host a web site we need a server computer which is a separate computer that contains application server, database in order to fulfil working of these servers in a single computer we use wamp which consist of apache, mysql, php supported for windows operating system

The modules are involved in the implementation of this system those are registration module, login module, authentication module, admin dashboard, chatbot module.

**Registration module**

Chemist has to register with user name and password he is a one type of user who can add his name, location, and contact number. Registration can be done by chemist only after registration it can be enabled by the admin without enabling that registered chemist his information about shop, stock, medicine etc cannot be shown in the user interface.

When the chemist registered in the database it assigned as 2 after enabling it become 1 this numbering is nothing but verification that is done by admin

Chemist cannot add the medicine, ingredient but he can add the stock of the medicine

**Login module**

After registration chemist has to login with his/her name and password. Admin can also login with specific user name and password

The chemist cannot login without registering himself in the database the chemist is assign to one and admin assign to zero

In the login module more then one admin can be logged in with different id's and name but it not good for the system to interact with the user

**Admin dashboard**

admin is one who can maintain the site he can (add, read, update, delete) medicine here admin can create new medicine name and ingredients, add shop and stock also he can create it read it update it any time but chemist cannot do whatever admin can do

**Chatbot module**

Chat bot is a conversational agent user can ask questions to chatbot it will respond back immediately and the chatbot uses AIML language

With the help of this chat bot messenger the user sends the request of the medicine and the bot will respond with appropriate option

## When a admin logs in
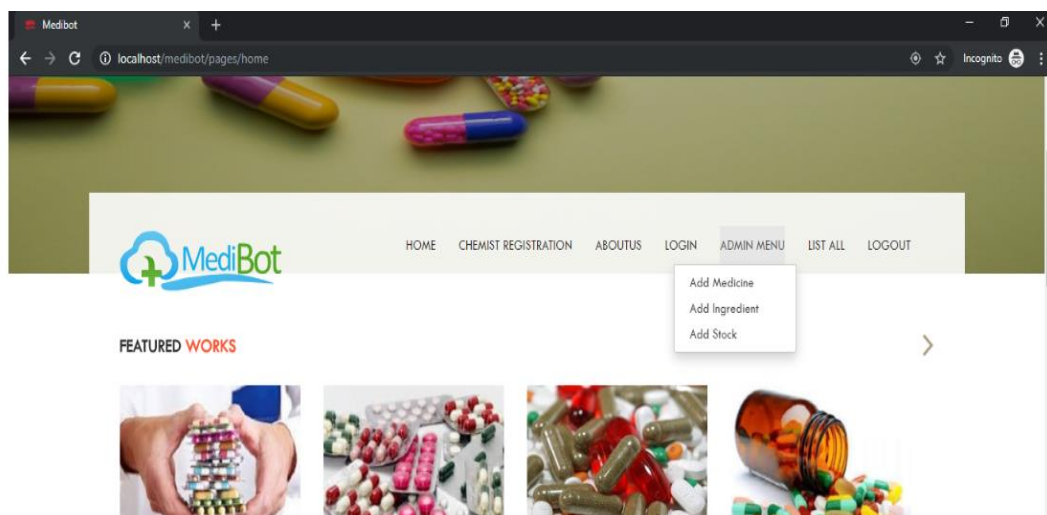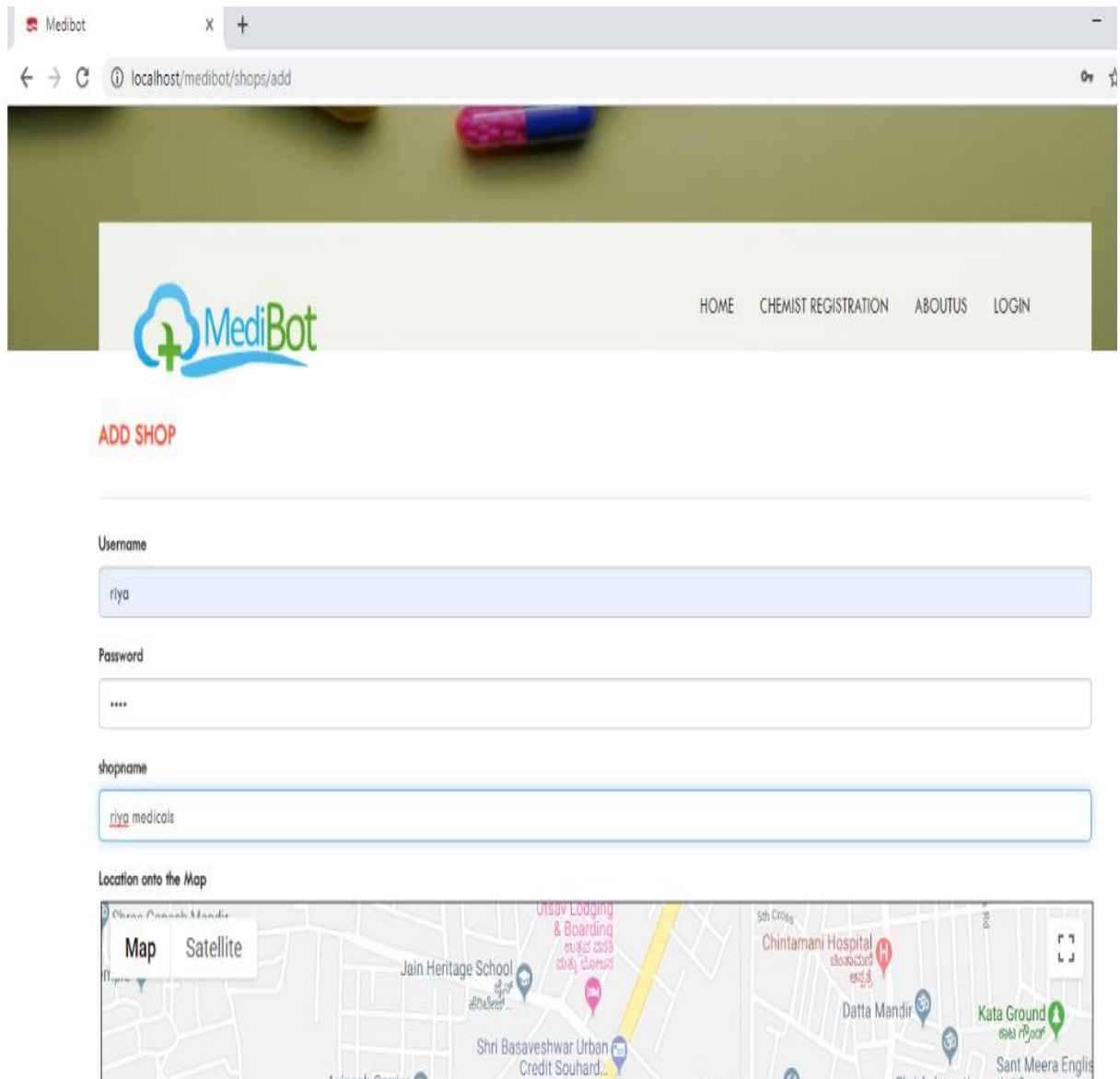


Figure 7.2 Admin login

The below diagram shows the registration of chemist in his registration blocks he add his name, name of the shop, his location by drag and drop the red mark on his particular area and he also provide has contact number after registration is done the information is successfully added into the database and after that admin enabled him

## When a Chemist registered



When the chemist set the location of his shop that can be shown on the map and this location can be in the form of longitude and latitude

# CHAPTER 8

# TESTING

Testing is vital to the success of the system. System testing makes a logical assumption that if all parts of the system are corrected, the goal will be successfully achieved. Inadequate testing or non-testing leads to errors that may not appear until months later. The testing of this project ensures that the data received by the user is accurate. This is ensured by viewing the lots of users visiting the site for taking the suggestion regarding the medicines. Our project also enables to view the results at any time in the website through the internet.

In this test plan all major activities are described below.

- Unit testing
- Integration testing
- System testing

## 8.1unit testing

Unit testing is essential for the verification of the code produced during the coding phase and hence the goal is to test the internal logic of the modules. Using the detailed design description as a guide, important paths are tested to uncover errors with in the boundary of the modules. These tests were carried out during the programming stage itself. Unit testing deals with testing a unit as a whole. Internal and unit testing can be automated with the help of coverage tools. Analyzes the source code and generated a test that will execute every alternative thread of execution.

## 8.2 Integration testing

- Ensure proper data from multiple data sources is ingested i.e. all required data is ingested as per their defined schema and data not matching schema should not be ingested. Data which has not matched with schema should be stored for stats reporting purpose. Also ensure there is no data corruption.

- Comparison of source data with data ingested to simply validate that correct data is pushed.

**Validation and System Testing**

Validation testing: is a concern which overlaps with integration testing. Ensuring that the application fulfils its specification is a major criterion for the construction of an integration test. Validation testing also overlaps to a large extent with System Testing, where the application is tested with respect to its typical working environment. Consequently for many processes no clear division between validation and system testing can be made.

| id | username | password | Type | verified |
|----|----------|----------|------|----------|
| 37 | arun | $2y$10$D/lp | 0 | 1 |
| 40 | Rahul | $2y$10$O1 | 1 | 1 |
| 45 | pranesh | $2y0$nZmi4 | 1 | 1 |
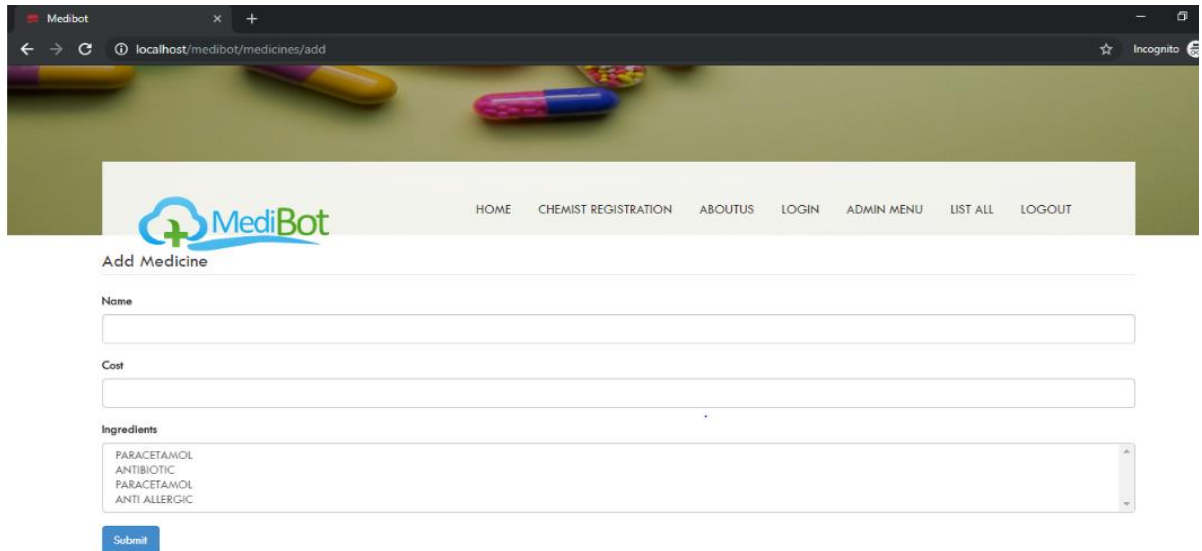
The above table test whether the login person is admin or chemist by specifying the type if the type is zero then he/she is admin otherwise he/she is chemist if the verified value is 2 then it means the admin is not still enabled him

# CHAPTER 9

**Snapshots**

**Add  medicines**

Admin adds the medicine  name and its substitute available
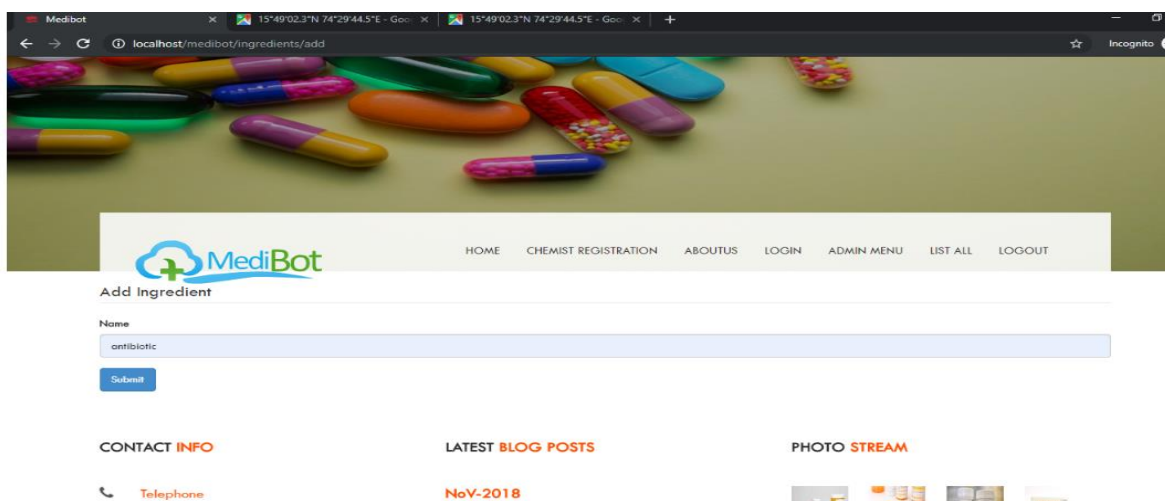


Figure 7.3 Add medicine

**Add ingredients**

Admin adds substitute available for particular medicine
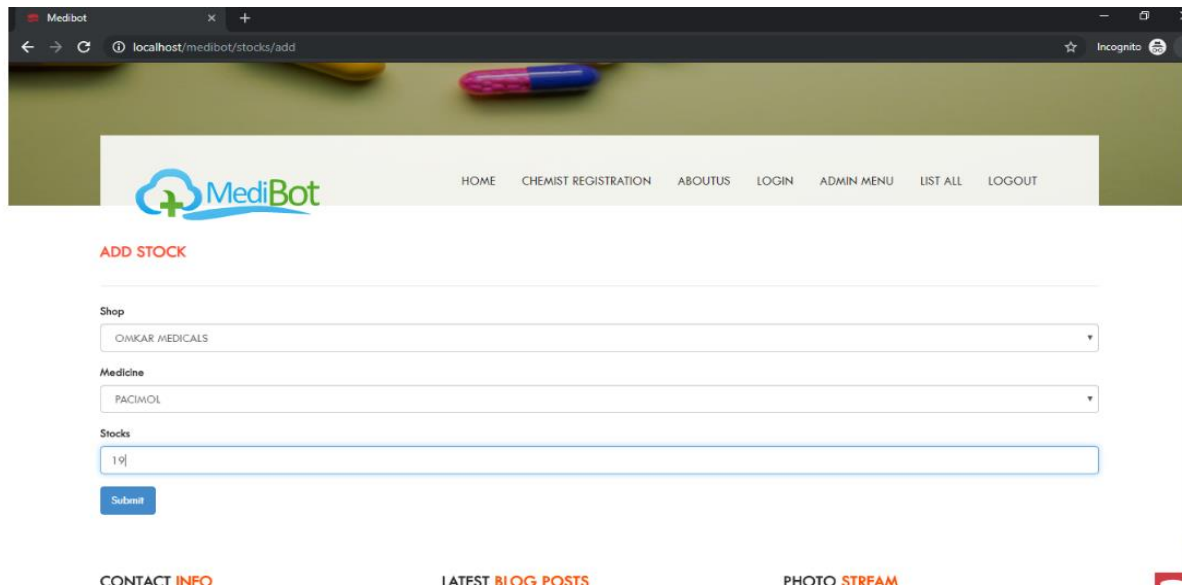


Figure 7.4 Add ingredients

### Add Stocks

Admin can add Stocks present at a Medical store.
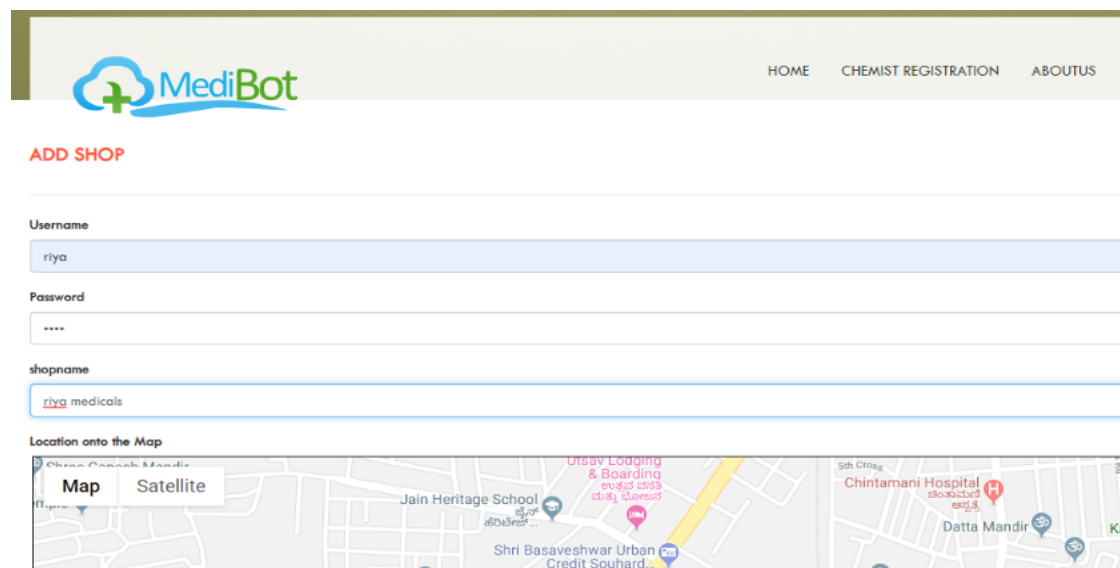


Figure 7.5 Add Stock

### Add Shops

Admin can add the Shop name
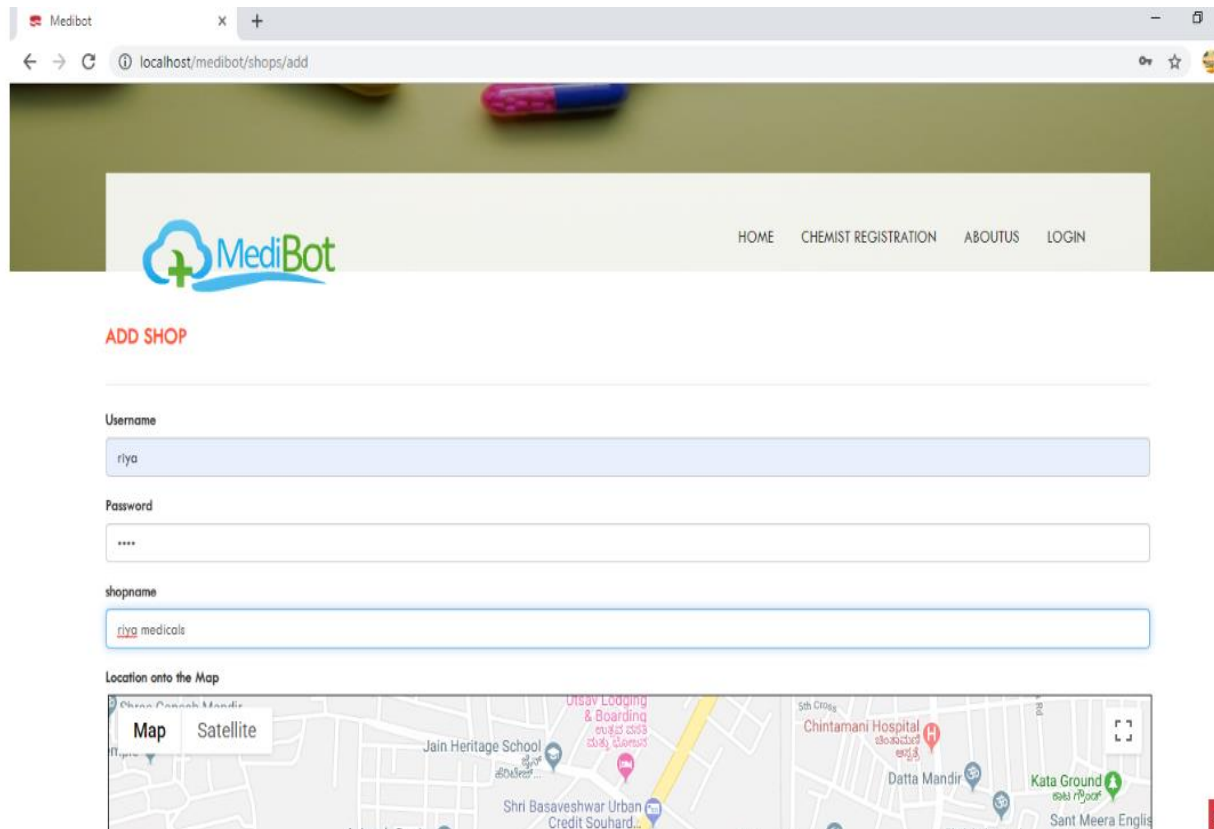


Figure 7.6 Add Shops

In this snapshot the admin can add the name of the shop that can be accessed by the user at the time of interaction with the system

## Chemist registration

Chemist feeds the data like shop name username password location and how many stocks medical store has



Figure 7.7 Chemist registration

## Conversation with Chatbot

User gives medicine name then Chabot gives its medicine substitute available then user have to select option once option has been selected it gives the location of the medical store. User has to type help after that the bot will respond like I am here to help you after this message it will display please provide the medicine name as shown in the figure 7.7

So this is how the chatbot interact with the user and these response whatever from the chat bot are stored in the database as templets
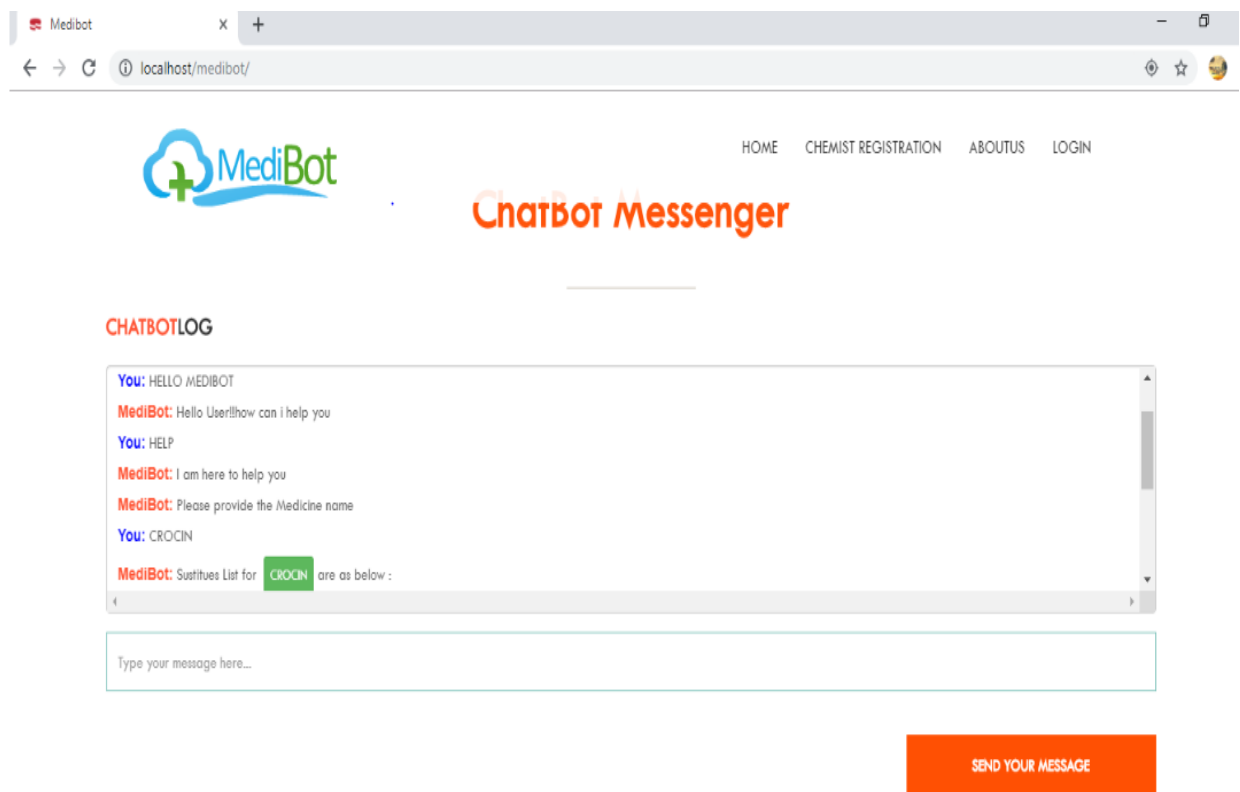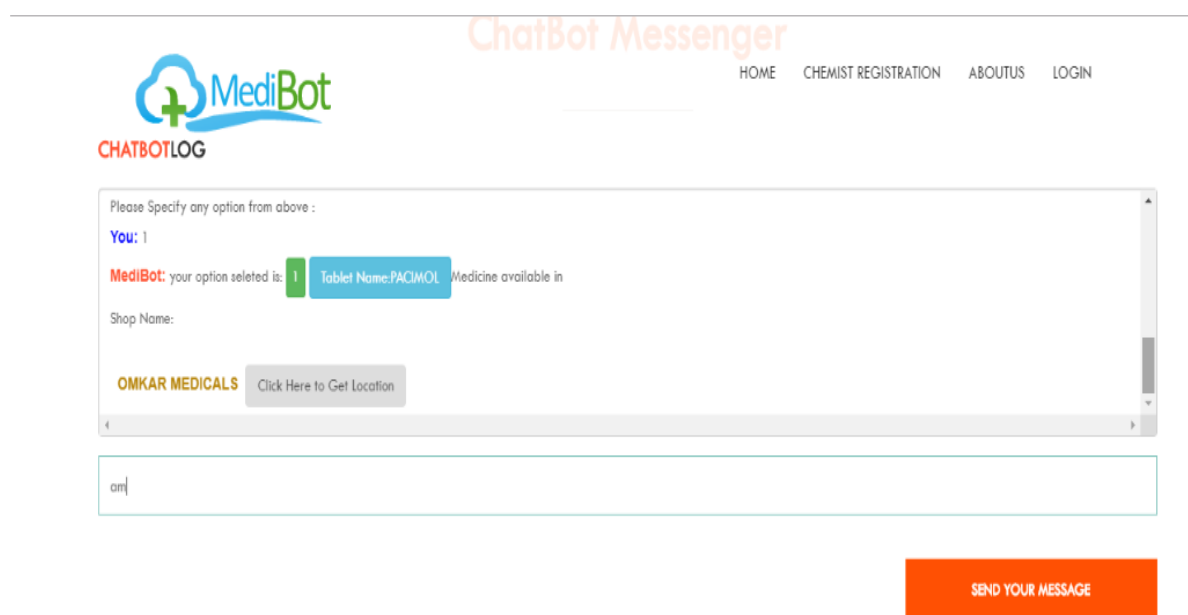
**Figure 7.8conversation with user**



**Figure 7.9: conversation with Chatbot**

# CHAPTER 10

## ADVANTAGES AND DISADVANTAGES

## ADVANTAGES:

- It is convenient for the patients to know about the alternatives available for the same medicine in the medical shops near him.

- Chatbots broadly are used for the intelligent assistant applications. In common, they generate responses from the user's input.

- Talking to a bot feels like talking to person.

- There is no need to install a separate application to use chatbot ,hence it saves storage space in device.

- Humans can serve a limited number of clients at the same time. This restriction does not exist for chatbots, and they can manage all necessary queries simultaneously.

- Their main advantages are:

- Reduced costs: Chatbots eliminate the need for labor during online interaction with customers. This is obviously a great advantage for companies that receive multiple queries at once. In addition to saving costs with them, companies can align the chatbot with their objectives, and use them as a means to enhance customer conversion.

- 24/7 Availability: Unlike humans, once we install a chatbot, it can handle queries at any time of day. Thus, the customer does not have to wait for a commercial of the company to help him. This also allows companies to monitor customer "traffic" during non-working hours and contact them later.

## DISADVANTAGES:

Complex interface: It is often considered that chatbots are complicated and need a lot of time to understand what you want in customer. Sometimes, it can also annoy the client about their slowness, or their difficulty in filtering responses.

They don't get you right: Fixed chatbots can get stuck easily. If a query doesn't relate to something you've previously "taught" it, you won't understand it. This can lead to a frustrated customer and the loss of the sale.

# CAPTER 11

## APPLICATION

- Chatbot can be used for money transfer
- Chatbot can be used in medical shop for checking the medicine of same ingredients as of the user wants
- It can be used travel for example vacation planning, reservation etc
- It can also be used in e-commerce

## CONCLUSION

Medibot help the users to select medicine its substitute for a particular medicine, where the medicine is available its location and number of stocks medical store has.AIML files make system more flexible and interactive. Besides automated conversational agent based system is played a significant role to interact with user. So service provider can spend less cost to provide automated conversational agent instead of human conversational agent's user gets unlimited full time service it is user friendly. Further use of the application can be widened for different domains of medicines.

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