

# BUILDING A WEBSITE FOR FINDING MEDICAL STORE AND MEDICINE AVAILABILITY

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**Abstract-** This application allows a visitor to search for a medicine and addresses of medical stores (wholesale and retail sales) where the medicine is available. The client is a small-scale pharmaceutical company that is distributing generic medicines to emergency medicines and having a good network of medical (retail) stores. Finding the availability of the medicine and a list of medical stores where the medicine is available. The visitor can quickly find the nearest medical store by selecting the area in the search tools. This application also provides a login account to a registered medical store. Using this account, a person from the medical store can update the list of medicines and their stock on daily-wise. Emergency medical services for chronic health problems are depending on the availability of medicines. Most of the times, unavailability of medicines affects the lives of people with chronic diseases. Addresses of medical shops that are providing 24 hours service should be made available to all. Some medical shops provide door delivery service for the needy people in an emergency even though the medical shop or distributor is not providing 24 hours service.

**Keywords –** Fuzzy logic system, cloud computing, Pharmaceutical.

## INTRODUCTION

The application software is titled “ Online Medical Store Finding and Availability of Medicines ”.The tailor-made software which suites the requirements of a medicine.

searching software is developed using Java as front end and SQL SERVER as the backend. This project is an online medicine application. This application allows a visitor to search for a medicine and addresses of medical stores (wholesale and retail sales) where the medicine is available. This application is a solution. So, this web application is planned to develop based on the requirements of the client.

Access to health care is a fundamental human right, enshrined in international treaties and recognized by governments throughout the world. However, without equitable access to essential medicines for priority diseases the fundamental right to health cannot be fulfilled. Access to essential medicines is also one of the United Nations’ Millennium Development Goals (MDGs). In developing countries today medicines account for 25–70% of overall health- care expenditure, compared to less than 10% in most high-income countries. The cost of newer products with proven advantage over older medicines, such as antiretrovirals, medicines for tuberculosis and new antimalarials, limits access to medicines in resource-poor settings. Moreover, up to 90% of the population in low- and middle-income countries must pay for medicines out of pocket due to lack of social insurance and inadequate publicly subsidized services.

Not only are medicines unaffordable for large sectors of the global population, but they are also a major burden on government budgets. In Member Countries of the Organization for Economic Co-operation and Development (OECD), many direct and indirect pharmaceutical price regulations remain in effect. However, in many low- and middle-income countries, national medicine pricing policies have been shifting from price controls to deregulation under the influence of structural adjustment and reform programs. Duties, taxes, mark-ups, distribution costs and dispensing fees are often high, regularly constituting between 30 to 45% of retail prices, but occasionally up to 80% or more of the total (7–9). The higher the manufacturer’s selling price, the more these elements increase the final price. Prices are also influenced by factors such as whether the country observes patents and the level of flexibility allowed under international treaties – which is eventually incorporated into national patent law; the level of domestic medicine production; national policies on protecting local industries; the level of competition between pharmaceutical manufacturers; and price regulation policies. National policies, medicine pricing and procurement strategies are required to ensure that medicines are affordable. While policies are also greatly needed to improve health infrastructure and financing as well as to ensure the rational use of medicines, high medicine prices are one of the biggest obstacles to access. Nevertheless, even in the face of a weak infrastructure and poverty, improvements in access can be achieved.

## DOMAIN INTRODUCTION

### Cloud Computing

Cloud computing is the delivery of computing and storage capacity as a service to a heterogeneous community of end-recipients. The name comes from the use of cloud-shaped symbols an abstraction for the complex infrastructure it contains in system diagrams. Cloud computing entrusts services with a user's data, software and computation over a network.

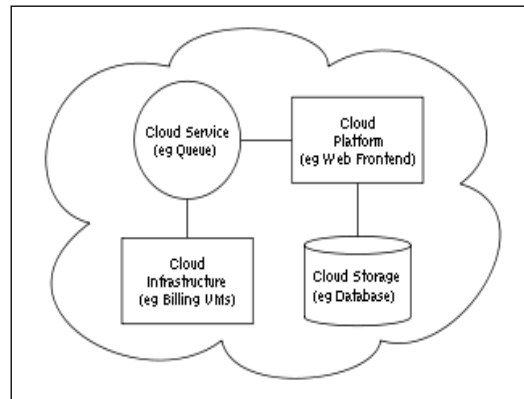
There are three types of cloud computing:

- Infrastructure as a Service (IaaS),
- Platform as a Service (PaaS)
- Software as a Service (SaaS)

Using Infrastructure as a Service, users rent use of servers (as many as needed during the rental period) provided by one or more cloud providers. Using Platform as a Service, users rent use of servers and the system software to use in them. Using Software as a Service, users also rent application software and databases. The cloud providers manage the infrastructure and platforms on which the applications run.

### Cloud Computing Architecture

Cloud architecture, the systems architecture of the software systems involved in the delivery of cloud computing, typically involves multiple cloud components communicating with each other over a loose coupling mechanism such as a messaging queue.



Elastic provision implies intelligence in the use of tight or loose coupling as applied to mechanisms such as these and others.

### Cloud computing types

- Public cloud
- Community cloud
- Hybrid cloud
- Private cloud

### Characteristics

- Cost
- Reliability
- Flexibility
- Scalability
- Performance
- Security
- Maintenance
- Virtualization

Cloud computing is defined as a type of computing that relies on sharing computing resources rather than having local servers or personal devices to handle applications. Cloud computing is comparable to grid computing, a type of computing where unused processing cycles of all computers in a network are harnessed to solve problems too intensive for any stand-alone machine. In cloud computing, the word cloud (also phrased as "the cloud") is used as a metaphor for "the Internet," so the phrase cloud computing means "a type of Internet-based computing," where different services — such as servers, storage and applications — are delivered to an organization's computers and devices through the Internet. Cloud Computing is a technology that uses the internet and central remote servers to maintain data and applications. Cloud computing allows consumers and businesses to use applications without installation and access their personal files at any computer with internet access. This technology allows for much more efficient computing by centralizing data storage, processing and bandwidth. A simple example of cloud computing is Yahoo email, Gmail, or Hotmail etc. All you need is just an internet connection, and you can start sending emails. The server and email management software are all on the cloud (internet) and is totally managed by the cloud service provider Yahoo, Google etc. Cloud computing is broken down into three segments: "application" "storage" and "connectivity." Each segment serves a different purpose and offers different products for businesses and individuals around the world. In June 2011, a study conducted by V1 found that 91% of senior IT professionals actually don't know what cloud computing is and two-thirds of senior finance professionals are clear by the concept, highlighting the young nature of the technology. In Sept 2011, an Aberdeen Group study found that disciplined companies achieved on average an 68% increase in their IT expense because of cloud computing and only a 10% reduction in data center power costs.

### How Cloud Computing Works

The goal of cloud computing is to apply traditional supercomputing, or high-performance computing power, normally used by military and research facilities, to perform tens of trillions of computations per second, in consumer-oriented applications such as

financial portfolios, to deliver personalized information, to provide data storage or to power large, immersive online computer games. Cloud computing uses networks of large groups of servers typically running low-cost consumer PC technology with specialized connections to spread data-processing chores across them. This shared IT infrastructure contains large pools of systems that are linked together. Often, virtualization techniques are used to maximize the power of cloud computing.

### Cloud Computing in the Data Center and for Small Business

Cloud computing has started to obtain mass appeal in corporate data centers as it enables the data center to operate like the Internet through the process of enabling computing resources to be accessed and shared as virtual resources in a secure and scalable manner. For a small and medium size business (SMB), the benefits of cloud computing are currently driving adoption. In the SMB sector there is often a lack of time and financial resources to purchase, deploy and maintain an infrastructure (e.g., the software, server and storage). In cloud computing, small businesses can access these resources and expand or shrink services as business needs change. The common pay-as-you-go subscription model is designed to let SMBs easily add or remove services and you typically will only pay for what you do use.

### Objective of the Problem

The data from the cloud issues are increasing in the sharing of data to other. To support efficiently managed of multiple auditing tasks in the cloud. So, that data extends our main result into a multi-client task, where third party auditor can perform multiple auditing tasks at the same time. Wide security and performance investigation demonstrates that security in the cloud and retrieve the data whenever we want. The proposed scheme is additional secure and highly efficient.

The main objectives of the problem are as follows:

1. To find the medical store nearby areas.
2. To find the availability of medicines.
3. To provide medicines in emergency situations.

### Scope of the project

The difficulty in finding reliable information on medicine prices and availability – and therefore in analyzing their components – hinders governments in constructing sound medicine pricing policies or evaluating their impact. It also makes it difficult for them to evaluate whether their expenditure on medicines is comparable to that of other countries at a similar stage of development. Moreover, those responsible for purchasing medicines cannot negotiate cheaper deals because they have no sound basis from which to start their negotiation. Even in countries where consumers and patients have greater purchasing power, governments, insurance funds and hospitals often find it difficult to decide on the selection of medicines because they lack information. Prices of the same medicines frequently vary between countries (11); some commonly used medicines have been found to be more expensive in developing countries than in industrialized ones (12–14); and many studies have shown that affordability is unrelated to purchasing power. The ex-manufacturer prices to countries – for the private sector – are often confidential. Medicine price indicator guides<sup>1</sup> provide the sales prices from large wholesalers of generically equivalent medicines to governments. However, they do not give the price patients must pay in either the public or private sectors and often do not include new, essential but patented medicines. A few countries have publicly available prices, but the information's use is obstructed by the country-specifics that apply and language barriers. The monitoring of prices and cross-country comparisons are therefore important.

### OBJECTIVE

- Increase the efficiency in finding medical stores.
- Less time consumption.
- User friendly
- More accuracy rates.
- To find the availability of medicines.

### LITERATURE SURVEY

#### What's in the Store? A Review of Arabic Medical and Health Apps in the App Store?

**AUTHORS:** Fatema akbar, Luis Fernandez-Luque

Mobile Health, also known as mHealth, is a fast-growing business within eHealth. Health apps (mobile applications) are very popular today. There are thousands of apps available in Google Play Store, the iOS App Store, and other platforms. However, it is not an easy task to find reliable health apps. In fact, there are health apps that can be harmful (e.g., giving incorrect diagnosis and treatment suggestions). While there have been some studies on the quality of health-related language-specific mobile applications (e.g., English and Spanish apps), these studies are often limited to apps relating to certain keywords such as “cancer” or “diabetes”. This study is a comprehensive review of all apps available in Arabic in the “Medical” and “Health and Fitness” categories of the Android app store.

#### Feature extraction from medical record text for TCM Zheng classification of psoriasis?

**AUTHORS:** Zehui He, Heng Weng .

Psoriasis is a chronic inflammatory skin disease that has bad effects on the quality of life of the patients. As psoriasis is intractable and its cause is difficult to discover, Traditional Chinese Medicine is proved in China to be a more effective medical way. In Chinese Medicine, decision on prescription is based on ZHENG rather than disease. Only after successful differentiation of ZHENG, can effective treatment of TCM be possible. As many papers in ZHENG classification modelling were reviewed, one common characteristic was found that although the original medical records were written and stored in text format, most experiments in these papers use data in a structured format which was extracted from its original text format. Therefore, whether or not full usage of information is extracted from original text should be considered seriously in building ZHENG classification. In this paper, machine learning methods were used to evaluate four feature extraction methods' capability in extracting useful information for psoriasis ZHENG classification from medical texts. The experiment result revealed that feature extraction has great influence on ZHENG classification and doctors' segmentation of medical case text, as the punctuations indicate, contains some information that dictionary does not contain and but is essential in ZHENG identification, such as the group of symptoms, degree words and so on. What's more, models with features from bow perform better than that from word2vec, which may illustrate that the sequence of words in medical texts has little impact on the classification of ZHENG.

### **Automated identification of health apps' medical specialties and promoters from the store webpages?**

**AUTHORS:** Alessia Paglialonga , Marco Riboldi.

The aim of this study was to develop automated methods, based on text analytics, for extracting information from the apps' webpages on the app stores and identify relevant apps' features such as the medical specialty and promoter. In this preliminary study, we classified a sample of more than 66000 apps from the US iTunes store into 18 medical specialties and seven types of promoters. Of the ~66000 apps analyzed over 18 specialties, we found that 24.1% were relevant to Nutrition, 23.9% to General Medicine, and 15.7% to Pharmacology, whereas less than 1.5% of apps were relevant to specialties such as Rheumatology, Radiology, Diabetes, Respiratory, Vision, and Sleep Healthcare. The analysis of promoters showed that Manufacturers and Software Houses and Independent Developers promoted 99% of apps combined, whereas promoters in the healthcare and science areas (e.g., Government Services, Healthcare Providers, or Scientific and Educational Organizations) still play a minor role. This study highlighted interesting trends and open opportunities in the field of health apps and suggested that the proposed approach might be a basis for future developments of support tools for informed, aware selection and adoption of health apps by patients and healthcare professionals.

### **The MedMaps apps: Mobile application for finding, managing and commercialize pharmacy**

**AUTHORS:** Nurfarahin Natasya, Binti Hamid ,Toni Anwar.

Nowadays, there are many inventions of technology, websites and mobile applications that can solve real-life problems people were once facing. The scope for this development of mobile application is focusing on medical field in which the purpose is to help people looking for medicine in the nearest pharmacy from their current location. The process of finding a pharmacy is not as easy as finding any other shops, especially to locate the pharmacy that is selling the exact medical product that users are looking for. The consequences will be a time-consuming and waste of money if they had to drive all away to the wrong pharmacy. That is how the idea of this Med Maps: Mobile Application for Finding, Managing and Commercialize Pharmacy is generated from. This application also provides Pharmacy with a platform to commercialize their store and promoting their products. As for public users, they can also manage their pill consumption intake by setting an alarm that will always remind them when to consume the tablets. The development of this application has going through all required phases based on the Rational Unified Process (RUP) software methodology. The analysis had been done and requirements are being documented properly. To ensure the efficiency of the end product, the literature review on existing system and technology are also important. In addition, the decision on the chosen software architecture plays an important role in organizing requirements, maintaining the quality and help supporting this application development. Other than software architecture and the results from requirements elicitation, low-fidelity prototype produced also helps in supporting the construction of this mobile application.

### **EXISTING SYSTEM**

A Decision tree is a decision support tool that uses a tree-like model of decisions and their possible consequences, including chance event outcomes, resource costs, and utility. a Decision tree is a decision support tool that uses a tree-like model of decisions and their possible consequences, including chance event outcomes, resource costs, and utility. Decision trees are commonly used in operations research and operations management. If, in practice, decisions have to be taken online with no recall under incomplete knowledge, a decision tree should be paralleled by a probability model as a best choice model or online selection model algorithm. Another use of decision trees is as a descriptive means for calculating conditional probabilities

### **DISADVANTAGES OF EXISTING SYSTEM**

- Not a user-friendly model
- Cannot be implemented in all places
- More time consuming

### **PROPOSED SYSTEM**

Rule Based Fuzzy Logic System: In a broad sense, fuzzy rule-based systems are rule-based systems, where fuzzy sets and fuzzy logic are used as tools for representing different forms of knowledge about the problem at hand, as well as for modeling the interactions and relationships existing between its variables

## ADVANTAGES OF PROPOSED SYSTEM

- User friendly model
- Can be implemented in all places
- Less time consuming

## SYSTEM REQUIREMENTS

### HARDWARE REQUIREMENTS

- Input Devices: Keyboard, Mouse
- Processor: intel i5 core
- Ram: 4 GB ram
- Hard disk: 500 GB hard disk

### SOFTWARE REQUIREMENTS

- Front End: Java, HTML, CSS, Javascript
- Back End: SQL server
- IDE: NetBeans IDE
- Web Server: Tomcat/Glassfish server
- Database: My SQL

## MODULES

### PUBLIC PAGES MODULE

These modules are valuable in giving data to a guest (login isn't required) about the site and contact address and numbers. The landing page shows the principal highlights of the site. The visitor can search the medicines in search box before buying the medicine to check its availability. The visitor can register into the website to buy medicines and make them home delivery for comfort.

### MEDICAL STORE MODULE

These modules can do add another medication to list, oversee existing Medicines List, and alter or Update meds stock and keep up the application settings. The medical store provides a data that how many stocks are available in shop to admin for update in the website. And they also provide new medicines available in shop.

### MEDICINES SEARCH MODULE

This module can accomplish for Search and propelled look for indexed lists and list items filtration. It also provides the nearest medical store list by selecting the areas in our own choice. It gives complete list of medicine properties like expire date and stock available and where the medicine is available.

### ADMIN MODULE

These modules allow an administrator of the website to manage cities and manage master data. And also provide Manage Medical Store User Accounts. The admin can see product list, update product, add product, delete product, view orders for to deliver the medicines to the members registered in the site.

## UML DIAGRAMS

UML stands for Code of Canon Law. UML is a widespread purpose modeling language for object-oriented software program development. The flag is controlled and created through the object control institution.

UML is supposed to come to be a common language for growing object-orientated computer application fashions. In its cutting-edge form, UML has two foremost additives: the metamodel and the notation. Certain strategies or kinds of techniques will also be introduced inside the destiny; or to the UML.

The Unified Modeling Language is a widespread language for expressing, visualizing, building, and documenting the architecture of software structures, as well as for modeling commercial enterprise and other non-software structures.

UML Sets engineering excellent practices that have proven to be effective in modeling large and complex structures.

UML in particular makes use of graphical notation to design software projects.

## GOALS

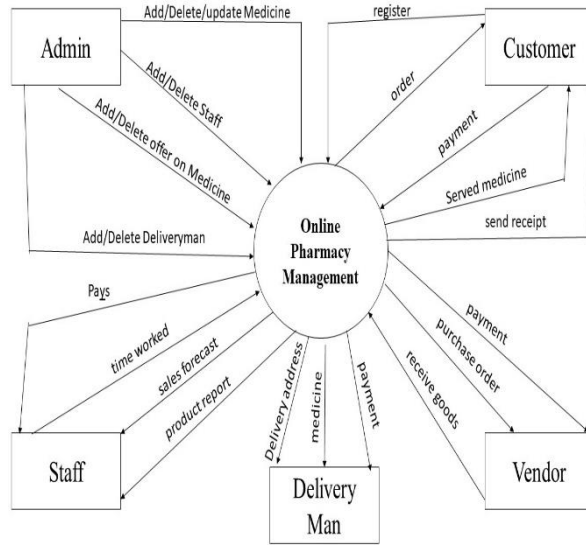
The principal desires of UML development are as follows:

1. Provide customers with a geared up-to-use expressive language of visual design so that meaningful examples can be developed and shared.
2. Provide expansion and specialization of engineering gear to enlarge core concepts.
3. Be impartial from specific programming languages and the improvement procedure.
4. Provide a formal foundation for understanding language formation.
5. Strengthen the boom of the market for OOP gear.
6. Support better-degree development standards, including collaboration, frameworks, fashions, and components.
7. Complete with the first-rate abilities.



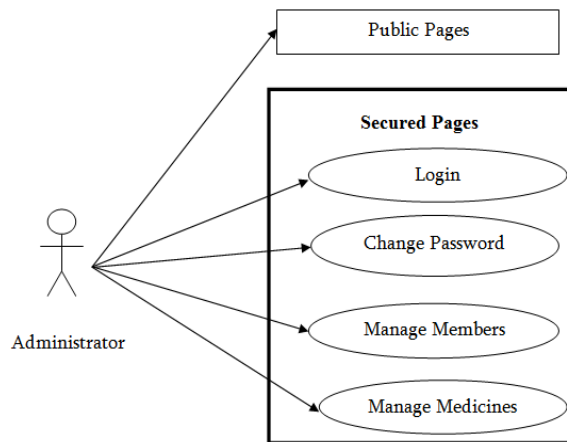
**ARCHITECTURE DIAGRAM**

An architectural diagram is a visual representation that maps out the physical implementation for components of a software system. It shows the general structure of the software system and the associations, limitations, and boundaries between each element.



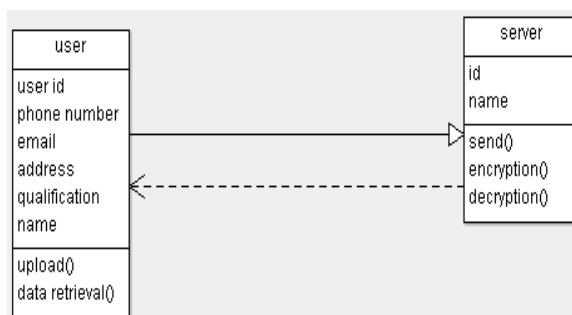
**USE CASE DIAGRAM**

A Unified Modeling Language (UML) use case diagram is a type of human diagram described and constituted of use case evaluation. The aim is to provide a graphical evaluate of the functionality of the gadget in terms of actors, their dreams (represented as use instances), and any dependencies between consumer cases. The predominant use case of a diagram is to reveal which system capabilities are finished for which actor. You can describe the roles of the actors inside the machine.



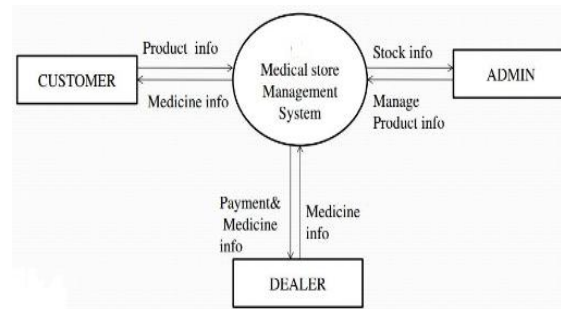
**CLASS DIAGRAM**

In software program engineering, a Unified Modeling Language (UML) magnificence diagram is a kind of static structural diagram that describes the shape of a gadget with the aid of displaying the system's instructions, their attributes, operations (or methods), and relationships among instructions. This is why the elegance includes facts.



**DEPLOYMENT DIAGRAM:**

A deployment diagram is a UML diagram type that shows the execution architecture of a system, including nodes such as hardware or software execution environments, and the middleware connecting them. Deployment diagrams are typically used to visualize the physical hardware and software of a system. Using it you can understand how the system will be physically deployed on the hardware. Deployment diagrams help model the hardware topology of a system compared to other UML diagram types which mostly outline the logical components of a system.

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