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Web-based and Mobile Oriented Herbal Information System in Nigeria

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Abstract: **Currently, people are now concerned about their health and start to recognize that herbs are one of the beneficial ingredients to spice up their life. Though most of them do not know which herb can exactly benefit them or how it looks like. This paper presents a web-based and mobile oriented herbal information system design. With this system, herb identification, herbal vocabulary and medicinal usages can provide a professional information station for people to collect herb knowledge and an interactive platform for people to exchange scientific ideas by using local/common language. Finally, in order to ensure the conceptual model is well defined, a set of rules for keyword searching is created to verify preciseness of output produced. The system is being planned to be applied in Western part of Nigeria.**

Keywords**:** Medicinal herb, Local name, information system, Nigeria.

I. Introduction

Currently, people are now very concerned about their health and most of them claim that herbs are one of the ingredients to spice up their life. In recent times, herbal medicine has found its way as an alternative to orthodox medicine, it is the oldest and still the most widely used system of medicine in the world today. Herbal medicine treats diseases and promotes health with plant material. The word herb can mean almost anything that grows and has medicinal or food flavoring value. In addition, herbs are plants with a long and proud tradition of being used for seasoning, medicine, fragrance, spiritual usage, cosmetic, veterinary and sorcery, etc. For example, culinary herbs are fresh or dried leaves which are used in cooking. Herbs can help in various functions of the body systems. Like it can help as an appetizer, help in the digestive process, and help in the absorption of food. General usage differs between culinary herbs and medical herbs. Herbs can also be designed as a landscape in a simple garden to make the environment more amazing with numerous herb plants.

Herbal medicine treats diseases and promotes health with plant material. For centuries herbal medicines were the primary methods to administer medicinally active compounds. Medication is an important aspect of human life which deals with the administration of ethical drugs on a health practitioner's advice. In Nigeria, today, the rate of poverty is so high that make impossible for people to afford modern medications [1]. According WHO report, 1996, the issues of fake drugs, drug abuse and excessive side effect of drugs are other major problems in modern medicine [2]. In recent times, herbal medicine has found its way as an alternative to orthodox medicine, it is the oldest and still the most widely used system of medicine in the world today [3]. It is mainly extracted exclusively from plant. It is used in all societies and is common to all cultures due to its affordability. Herbal medicine is increasingly being validated by scientific investigation which seeks to understand the active chemistry of the plant; many modern pharmaceuticals have been modeled on, or derived from chemicals found in plants [4]. The therapeutic activity of plant is due to its complex chemical nature with different part of the plant providing certain therapeutic effects [5]. Ancient wisdom has always known the roles herbs have played in the

intricate balance of well-being of the human species. They have little or no side effect as a result of their preparation from natural herbs [6].

In Nigeria today, orthodox medicine has been widely accepted due to the fact that it is the mother of all medicine. Nevertheless, orthodox medicine has its own disadvantages, including issue of price of the medicine and the inability of people to afford it. The present economic situation has made it difficult for people to afford the cost of medication, leading to self medication. Self medication is the administration of ethical drugs by a lay-man without a health practitioner's advice [7].

In life, there is always an alternative to everything. The alternative to life itself is death. The alternative to orthodox medicine is herbal medicine, otherwise referred to as traditional medicine. Traditional medicine is practiced in every part of the globe, both developing and developed nations. The practice has reached various degrees of sophistication in response to level of development in different parts of the world. One of the most important components of alternative Medicine is herbal medicine [8].

The problem of herbal medication observed over the years was that their portions are not standardized, nor are they dispensed to patients in specific doses or in strictly regulated quantities. Inadequate information about the drugs and the herbalist may also die with the knowledge of the herbs which may lead to misinformation about the herbs in generations to come [9]. Sequel to this, this paper proposes a web-based decision support system for herbal medicine prescription [10]. With the development of the Internet, Web-based Decision Support Systems (DSS) have become a new trend in DSS research now provide us with the tools and knowledge that we need to improve health care, enabling solutions that benefit patients as well as healthcare professionals and institutions in both the private and public sectors worldwide [11], [12] and[13]. The developed system provides easier way to get herbal prescription without the intervention of herbal practitioners; it is self diagnostic and an alternative medication to orthodox medication [14]. This paper addresses the problems of a design for a collecting herbal information system. It should provide some mechanisms for selecting a set of dynamic and highly confident terms that it can apply for improving searches on the search engine.

II. Review of Related works

According to [15] in their empirical study on medicinal herbs information system, the authors concluded that it is high time for Malaysian to be able to recognize herbs as one of the beneficial ingredients to spice up their life. But most of them do not know which herb can exactly benefit them or how it looks like.

They [16] classified Web applications as the fastest growing classes of software systems today. Web applications are being used to support wide range of important activities: business transaction, scientific activities like information sharing, and medical systems such as expert system-based diagnoses. Web applications have been deployed at a fast pace and have helped in fast adoption but they have also decreased the quality of software.

[17] in their research data on medicinal plants in Estonian folk medicine: collection, formation and overview of previous researches concluded that no information at hand to show for the recording of herbs. Different researchers have studied specific aspects of Estonian folk medicine, but no comprehensive overview has been made so far. Most, but not all, previous researches conducted in this field are descriptive and do not really take into account the multiple possibilities and the potential scope of the use of medicinal herbs, caused largely by the use of "folk" names instead of "official" names of herbs in the material under discussion.

The first scholar to discover the potential value of Estonian folk medicine was Johann Georg No¸ lDragendorff, a German-born professor of pharmacy. He works as the head of the Institute of Pharmacy at the University of Tartu from 1864 to 1894.Professor Dragendorff who had collected records of treating among different nations and now wants to present knowledge of Estonians' medicinal plants in one book, and thus turned to the audience for help. The speaker asks now the members of the Writers' Society to send answers to the questions presented to him by Professor Dragendorff. These were:

1. Which herbs (plants) are used by the Estonians for treating diseases?
2. Which parts of these are used?
3. What are these plants called?
4. What kind of superstitious tales are told about these plants?
5. Against which diseases are these plants or parts of them used?
6. How are they used, whether dried or fresh, boiled or as in herbal tea, whether administered internally or externally?
7. Is something derived from animals used for treating?

It is strongly recommended that the herbs are sent as well. The speaker hopes that his wish would be fulfilled.

The article provides a survey of collecting and preserving Estonian folk medical lore from the 19th century onwards and casts light on the availability of medical care in Estonia at the time of the first appeals. Thereafter, the authors take a look at literary sources that may have been influential at the end of the 19th and the beginning of the 20th century. Also, an overview of most important research publications on Estonian ethno botany is given and explicit course for future research charted.

The sporadic influx of mobile phones has posed new opportunities for the proliferation of robust user-centric applications for mobile users. Therefore, people can now take care of their health through their mobile phone according to Ogirima and his groups' work "a mobile-oriented decision support system for herbal medicine prescription"[14]. In 2013, Ogirima and groups again presented an integrated method to develop a Web-based Decision Support Systems (DSS) for prescription in herbal medicine. The group review the existing research works in herbal medicine revealed that the potential of web platforms was exploited to aid herbal medicine survival [18].

III. Materials and Method

Methodologies are comprehensive, multiple-step approaches to systems developments that will guide people's work and influence the quality of the final product. Most methodologies incorporate several development techniques.

The systematic procedure by which a complex or scientific task is accomplished is called techniques. Techniques are particular processes that will follow by, to ensure that the work is well thought-out, complete and comprehensible to others. The MHIS is a web-based and mobile application where this system is connected with other system, or connected to the internet. The detail of the methodology and approach adopted are described as follow.

A. Architectural Framework of the Web-based information system for prescription in herbal medicine

In this paper, an architectural framework for a web-based information system for herbal medicine prescription is developed and presented in Figure 1. The framework highlights the structure of the developed system together with the way they interactions with each other. The architecture of the system shows constraints imposed by the user requirements and the available technology.

The components of the Framework are explained as follows.

1. Internet terminal/Mobile Devices (Desktop, Laptop, PDAs)
2. User Interface for Herbal Medicine Prescription
3. Web server
4. Firewall
5. Herbal Medicine Knowledge base
6. Inference engine
7. Database
8. Ozeki server

Internet Terminals /Mobile Devices: The user's desktop send message to the dedicated internet devices connected to the server where the application resides with the help of internet protocol provided by the internet operator. The information is got from the server by using the internet protocol; this enables the client to send information to the server and to be able to receive information back from the server. Users mobile phone send message to the dedicated mobile phone connected to the application server where the application resides with the help of SMS protocol provided by the mobile operator and got the information from the server by using the SMS protocol as well. This enables the client to send information to the server and to be able to receive information back from the server.

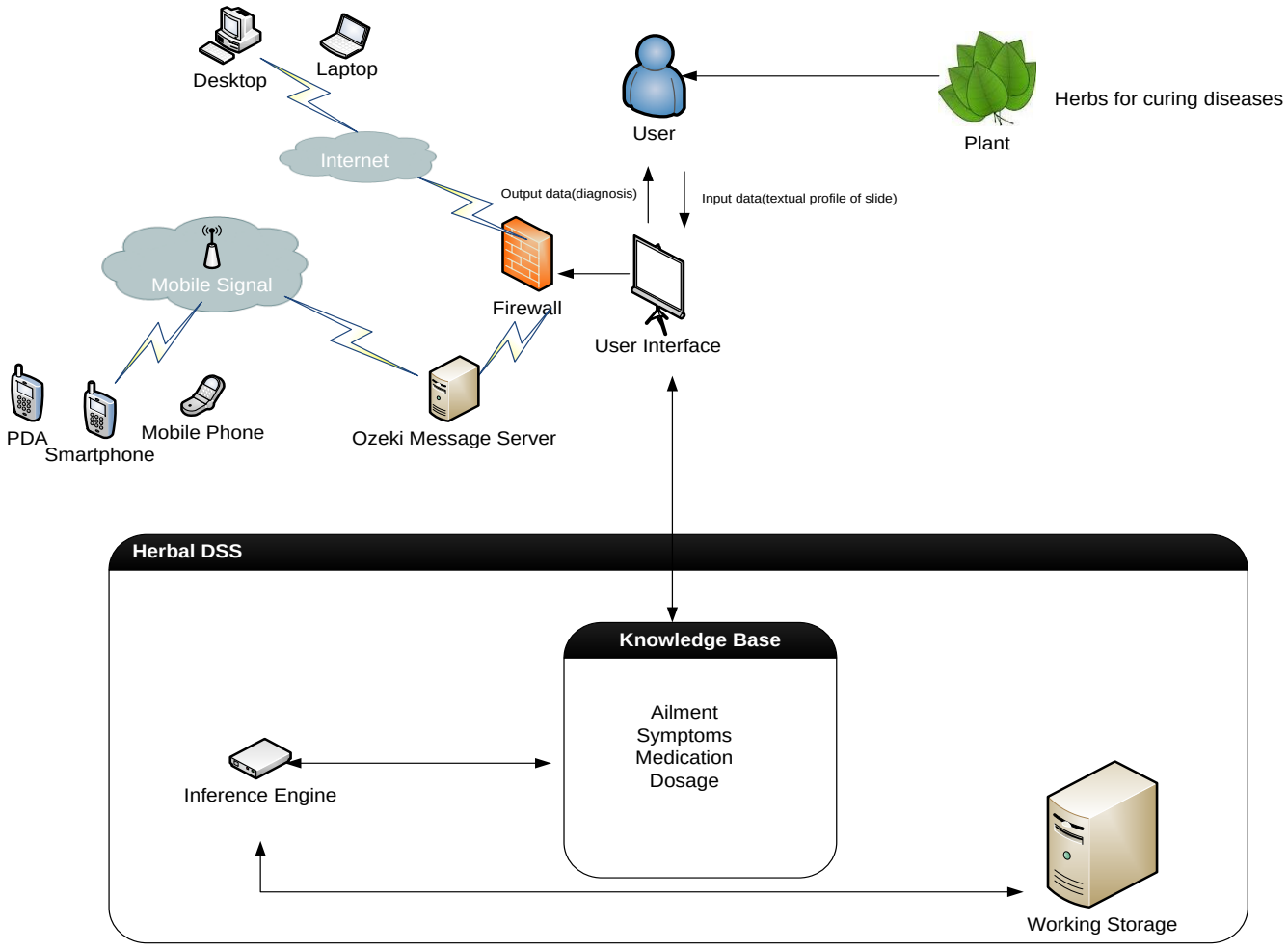


Figure 1. Architectural Framework of Medicinal Herbs information system for Prescription Herbal Medicine

Internet Terminals /Mobile Devices: The user's desktop send message to the dedicated internet devices connected to the server where the application resides with the help of internet protocol provided by the internet operator. The information is got from the server by using the internet protocol; this enables the client to send information to the server and to be able to receive information back from the server. Users mobile phone send message to the dedicated mobile phone connected to the application server where the application resides with the help of SMS protocol provided by the mobile operator and got the information from the server by using the SMS protocol as well. This enables the client to send information to the server and to be able to receive information back from the server.

User Interface: User input data (diagnosis request) through the user interface, which consequently calls the knowledge base, feeding the user input data, the knowledge base is being consulted then the inference engine comes to a final diagnosis, which is displayed by the user interface to the user.

Web Server: Is the gateway application that enables you and your applications to send/receive internet messages through internet devices to your computer. It has an easy to use user interface, and an excellent internal architecture.

Firewall: Firewall is software that checks information coming from the internet or a network, and then either blocks it or allows it to pass through to the attempted system depending on the firewall settings. Allowing information through the firewall, sometimes called unblocking, is when an exception is created to enable a particular program to send information back and forth through the firewall.

Knowledge Base: Knowledge base consists of some encoding of the domain of expertise for the system. This can be in the form of semantic nets, procedural representations, production rules, or frames. These rules occur in sequences and are examined by the inference engine; actions are executed if the information supplied by the user satisfies the conditions in the rules.

Inference Engine: Inference engine is the dialogue conducted by the user interface between the user and the system. The user provides information about the problem to be solved and the system then attempts to provide insights derived or inferred from the knowledge base. These insights are provided by the inference engine after examining the knowledge base.

Database: The database is a fundamental part of the system. It is also called as the working storage and it works hand in hand with both the knowledge base and the inference engine as a means of storing data. It stores all important and detailed information of the Herbal and that of the administrator. Besides, it stores the detail set of prerecorded messages dropped by user, which are suitable for different guidance cases. In addition, the database server has both temporal validity and precise timing constrains which allow it to store the most recent data and effect instant changes as soon as they occur.

Ozeki Message Server: SMS gateway is a flexible Gateway application that enables applications to be sent/received SMS messages to mobile devices with dedicated computer. The application can use a GSM mobile phone attached to the PC with a phone-to-PC data cable or IP SMS technology to transmit and receive the messages.

B. Database design of the Web-based information system for prescription in herbal medicine

This helps to manage or structure their data in a logical way. In addition, database design is a process to produce detailed data model of a data-base. The detailed data model consists of detailed value parameters, attributes, primary key, foreign key and relationship between entities. The designing of the database needs an excellent developer's understanding of two criteria which are the domain area and database development. Effective database design can assist developer to perform well from the beginning. In addition, it can reduce costs and time during development process. An excellent database development is important to get an optimal performance and high productivity. In order to achieve the quality of system, the structure Figure 2 has to be properly presented which representing information in the database design to ensure the database works properly.

Data dictionary or metadata or data repository is a central storehouse of information about the system's data as shown in Figure 3. Data dictionary is used to collect data. The data dictionary also defines and describes all data elements and meaningful combinations of element. There are three (3) tables existing in MHIS which are the herbs info table, add comment/request table and login table. These tables hold the data that is related. Tables 1 to 3 show data dictionary and the items that are defined in MHIS. Table 1 keeps all information of herbs as described in metadata

C. Conceptual modeling of the Web-based information system for prescription in herbal medicine

The emphasis of logical database model is on logic, which is a readable method and useful for representing the knowledge. This can be done through the conceptual modeling Conceptual modeling is a process to model data of domain. Conceptual modeling is a well known technique of data modeling. It represents domain entities, meaning of the data, concepts or terms used by domain experts, function or relationship between concepts. Conceptual model, also known as conceptual level schema as shown in Figure 2, is a part of the process in database design which determines information needs of user. It is able to provide an accurate, complete representation of one's' understanding of the domain, with adaptation for different purposes.

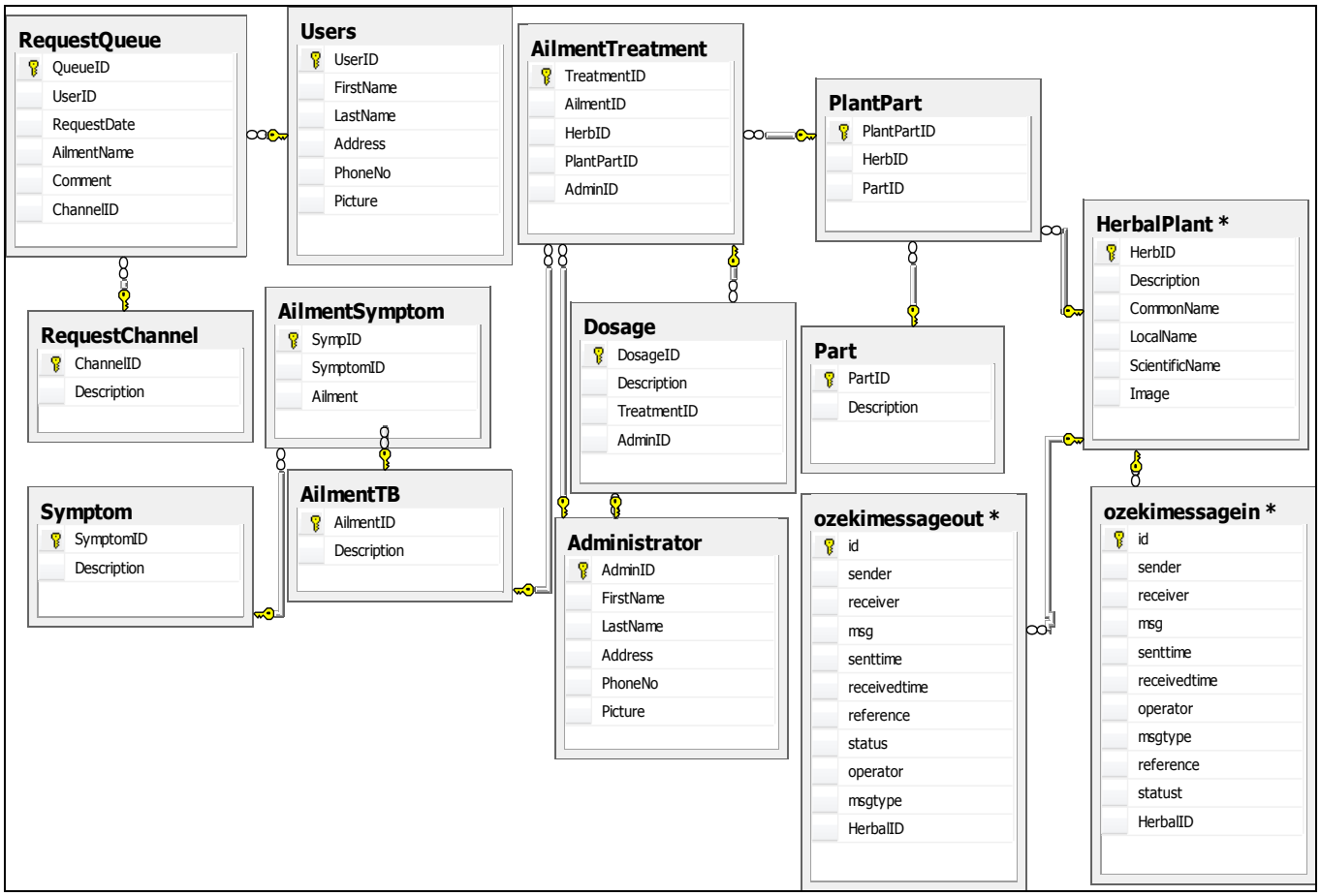


Figure 2. The structure knowledge of herbs database

Table 1. Metadata of the developed System

Meta Data	Data Type	Literal Meaning	Length
RequestQueue			
QueueID	Int	Integer	
UserID	Uniqueidentifier	Unique Identifier	
RequestDate	Datetime	Date Time	
AilmentName	nvarchar(50)	String	50
Comment	nvarchar(50)	String	50
ChannelID	Int	Integer	
RequestChannel			
ChannelID	Int	Integer	50
Ozekimessagein			
Id	Int	Integer	
Sender	varchar(100)	String	
Receiver	varchar(100)	String	50
Msg	varchar(100)	String	50
Senttime	varchar(100)	String	50
Receivedtime	varchar(100)	String	50
Operator	varchar(100)	String	50
Msgtype	varchar(100)	String	

Reference	varchar(100)	String	
Status	varchar(100)	String	
symtomID	Int	Integer	
Ozekimessageout			
Id	Int	Integer	
Sender	varchar(100)	String	50
Receiver	varchar(100)	String	
Msg	varchar(100)	String	
Senttime	varchar(100)	String	50
Receivedtime	varchar(100)	String	
Reference	varchar(100)	String	
Status	varchar(100)	String	
Operator	varchar(100)	String	
Msgtype	varchar(100)	String	
TreatmentID	Int	Integer	
AilmentID	Int	Integer	
HerbID	Int	Integer	
PlantPartID	Int	Integer	
AdminID	Uniqueidentifier	Unique Identifier	
Part			
PartID	Int	Integer	
Description	nvarchar(50)	String	50
Dosage			
DosageID	Int	Integer	
Description	nvarchar(50)	String	50
TreatmentID	Int	Integer	
AdminID	Uniqueidentifier	Unique Identifier	
HerbalPlant			
HerbID	Int	Integer	
Description	nvarchar(50)	String	50
CommonName	nvarchar(50)	String	50
LocalName	nvarchar(50)	String	50
ScientificName	nvarchar(50)	String	50
Image	nvarchar(50)	String	50
Administrator			
AdminID	Uniqueidentifier	Unique Identifier	
FirstName	nvarchar(50)	String	50
LastName	nvarchar(50)	String	50
Address	nvarchar(50)	String	50
PhoneNo	nvarchar(50)	String	50
Picture	nvarchar(50)	String	50

D. Preparation of herbs from medicinal Plant

Most of the herbal medications are mainly prepared by grinding, pounding, chewing, boiling, cooking, roasting and smoking. The herbs are prescribed in water, alcohol, tea, and soft drinks (7up), pap or milk. Some of these vehicles (medium or carriage) also facilitate the activity of the medicinal plants. The herbs are taken mainly through the mouth while others like topical, insects or suppository and inhalation are also used. The plants parts used include the roots, stem, leaves, stem barks, root barks, flowers, seeds, juice/sap, tubers, rhizomes, fruits and whole plants form different plant families. Herbs can be taken in the form of decoction (liquid preparation obtained by boiling medicinal plants in water and extracting it by straining the preparation, infusion steeping of medicinal plants in water to extract its active principle) or as a poultice (applying the whole herb rather than liquid extract to the affected part). It may also be used as prophylactive (to prevent the onset of the disease) and curative [1]. The herbal medicines and their preparations (Concoction) have been widely used for thousands of years in many oriental countries, such as in China, Korea, Japan, etc. Process of manufacturing plant extracts (transforming freshly harvested medicinal plants into extract): See Figure 3.

However, one of the characteristics of oriental herbal medicine preparations is that all the herbal medicines, either presenting as single herbs or as collections of herbs in composite formulae, is extracted with boiling water during the decoction process. This may be the main reason why quality control of oriental herbal drugs is more difficult than that of western drug. As pointed in "General Guidelines for Methodologies on Research and Evaluation of Traditional Medicines (World Health Organization, 2000)". The reasons for the lack of research data are due to not only to health care policies, but also to a lack of adequate or accepted research methodology for evaluating traditional medicine"[19].

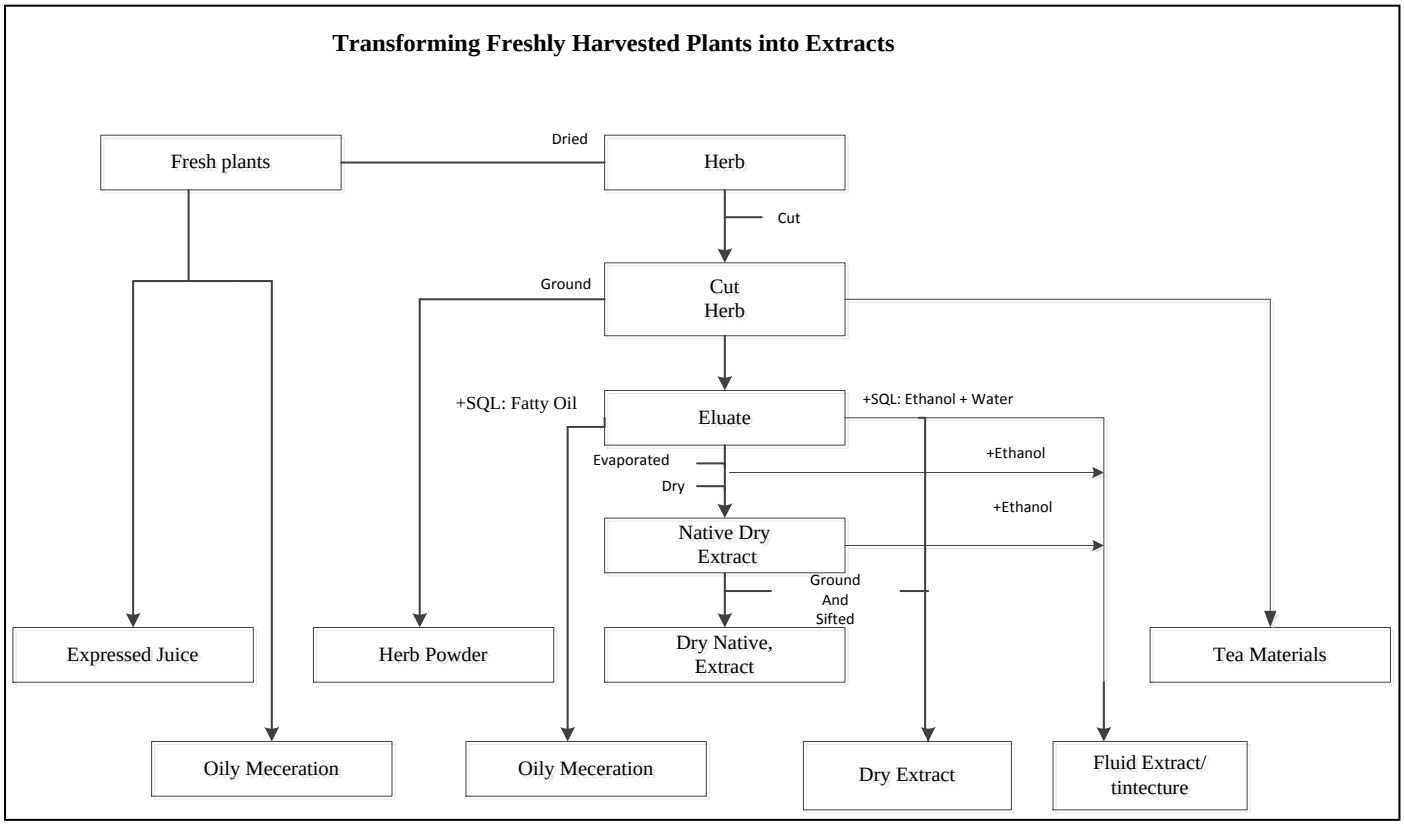


Figure 3. The process of manufacturing plant extracts

E. Implementation Tools

The programming tool used to implement the design is C# using Microsoft Visual Studio 2008 integrated development environment (IDE). Visual Studio *.NET* is Microsoft's integrated development environment (IDE) for creating, running and debugging programs for the development of the designed system.

IV. Results and Discussion

The system output is produced after the system is tested in order to ensure it produces the expected result. Further discussion describes each result that has been produced by the web-based and mobile oriented herbal information system in the testing activity. Figure 4 to 8 shows the design of interface for medicinal herbs information system. To insert a new data of herb, view the entire data, and searching. The processes of inserting a new data into the system by enter the common name, scientific name, local name (Yoruba), part used, and the picture of herbs. Before

admin insert a new data, they need to search the herbs first to check either the herbs is exist or not. If the herb is not exists, so they can proceed to insert a new data of herb, as shown in Figure 4. However, the system is user-friendly software applications based on linked data standards are still lacking. While there are several specialized and user-friendly interfaces for accessing certain linked modules, such as a dedicated interface.

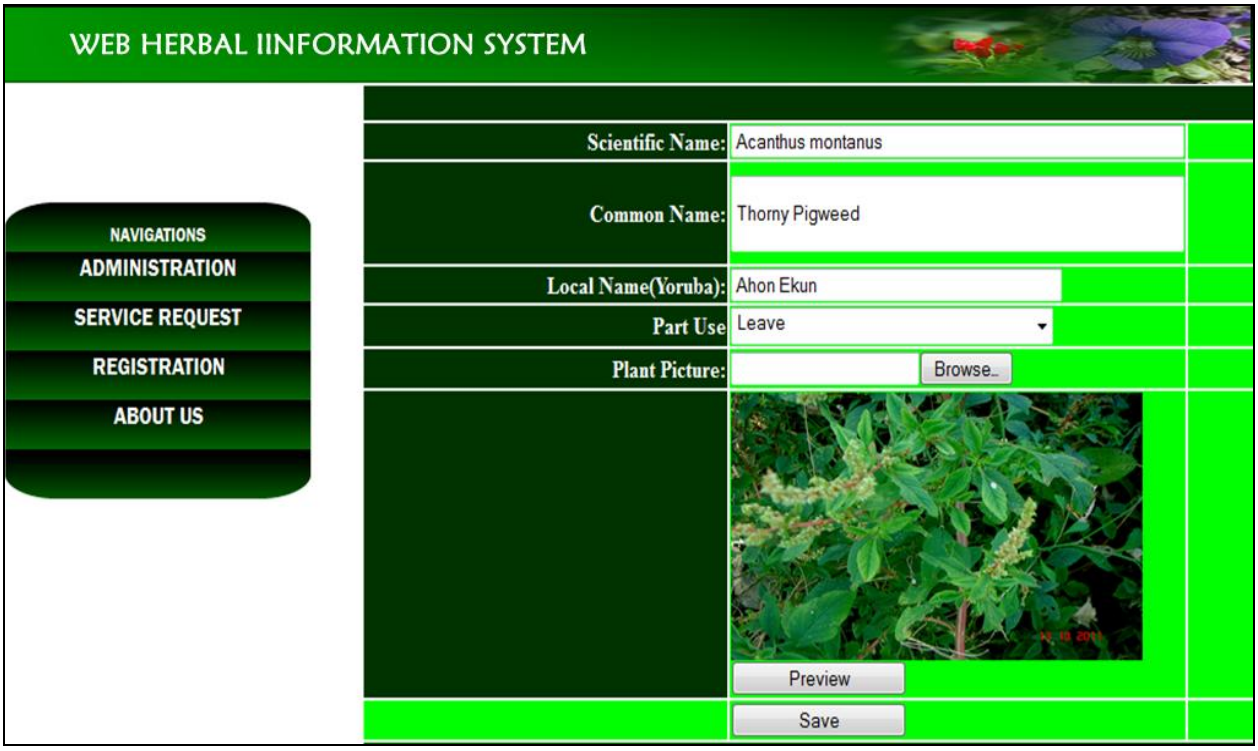


Figure 4. The interface for plant picture

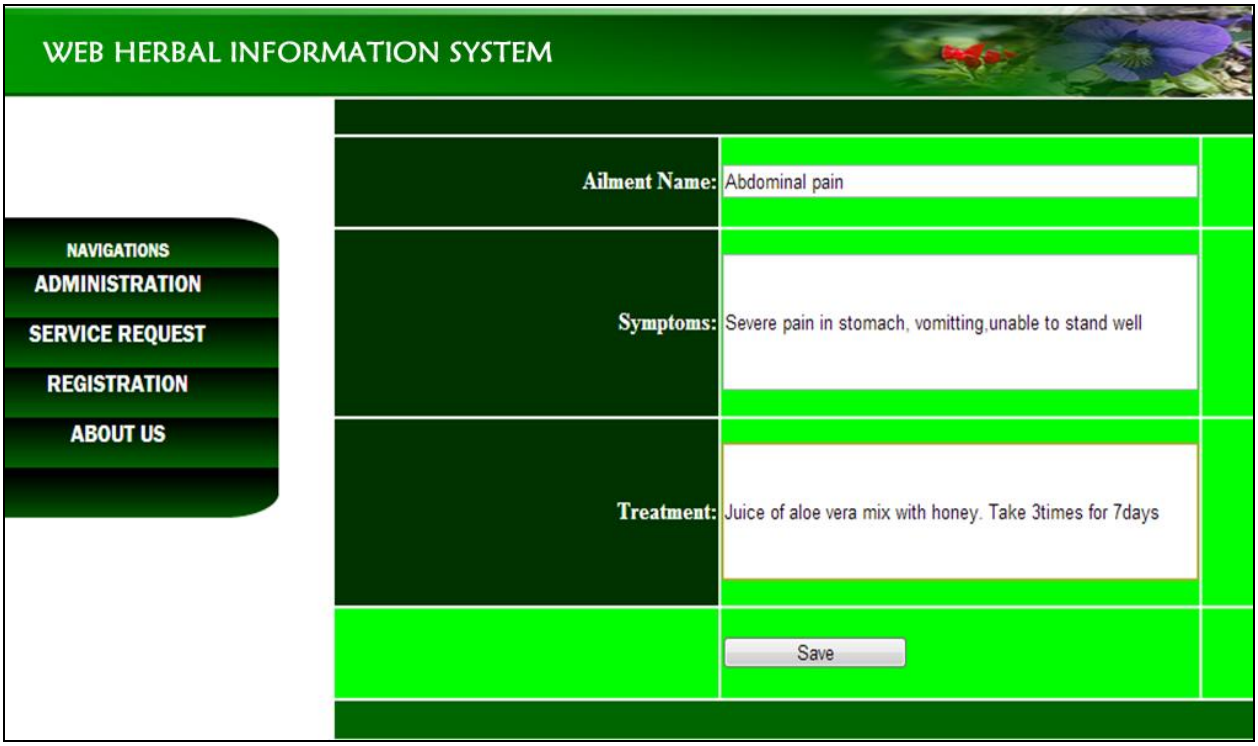
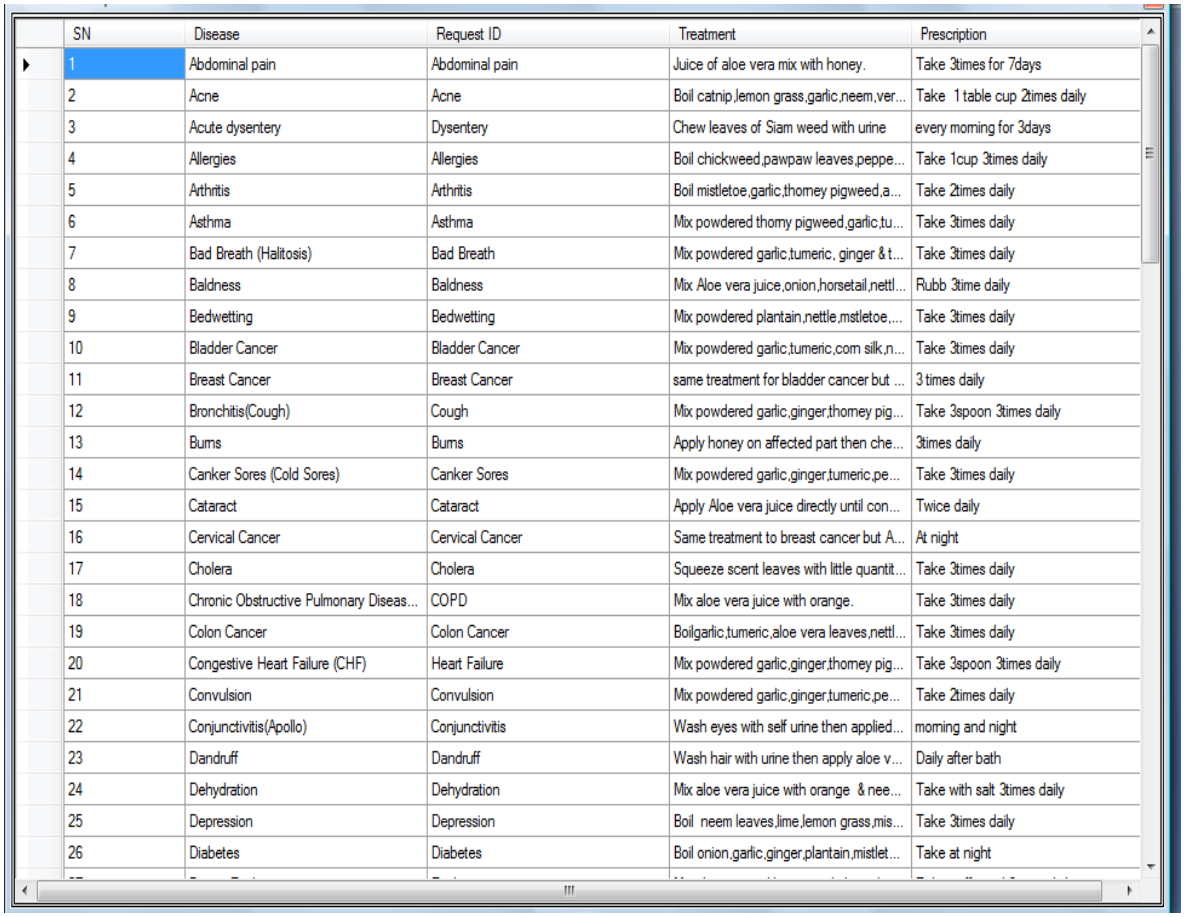
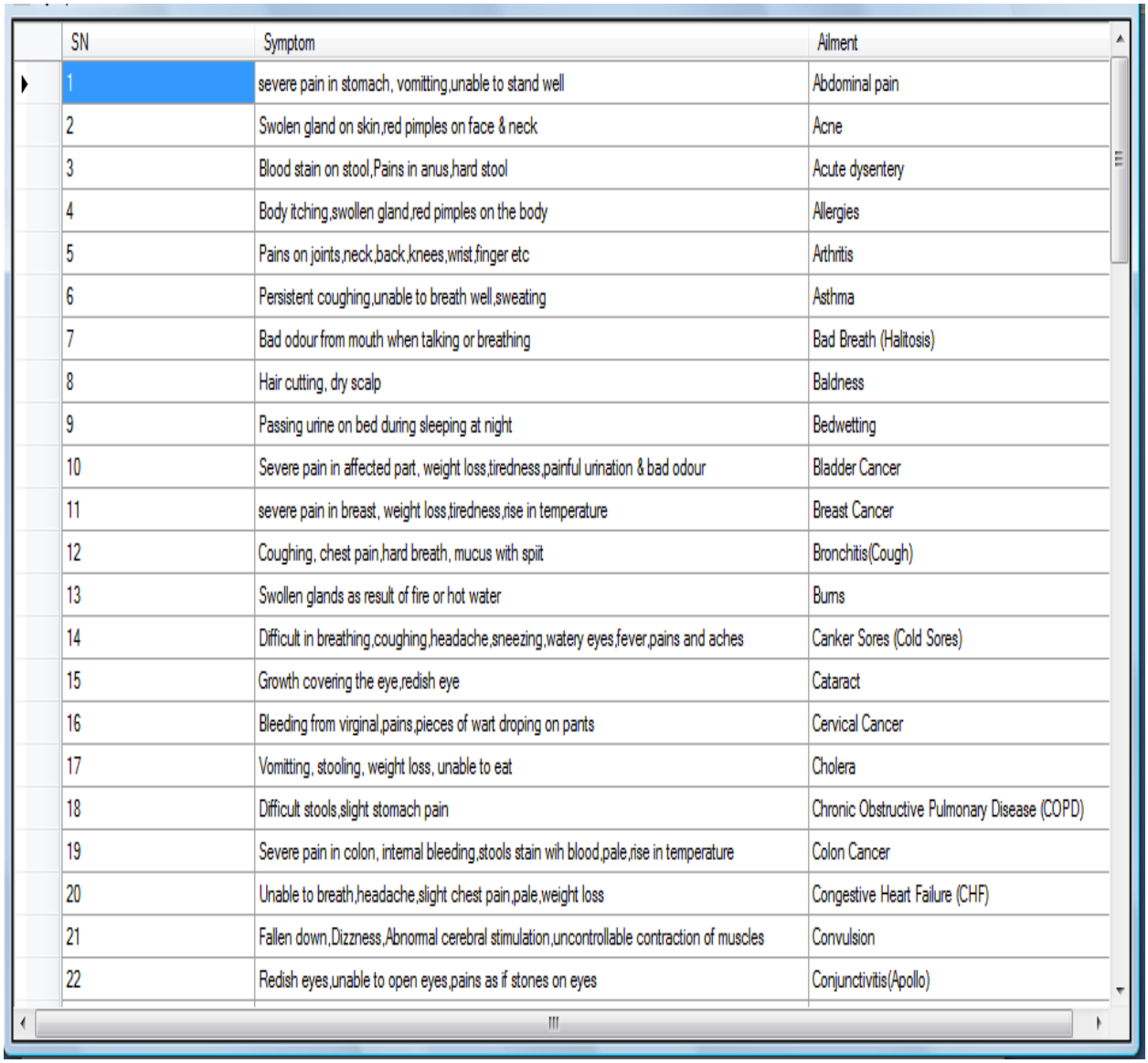


Figure 5. The interface for ailment, symptom and prescription



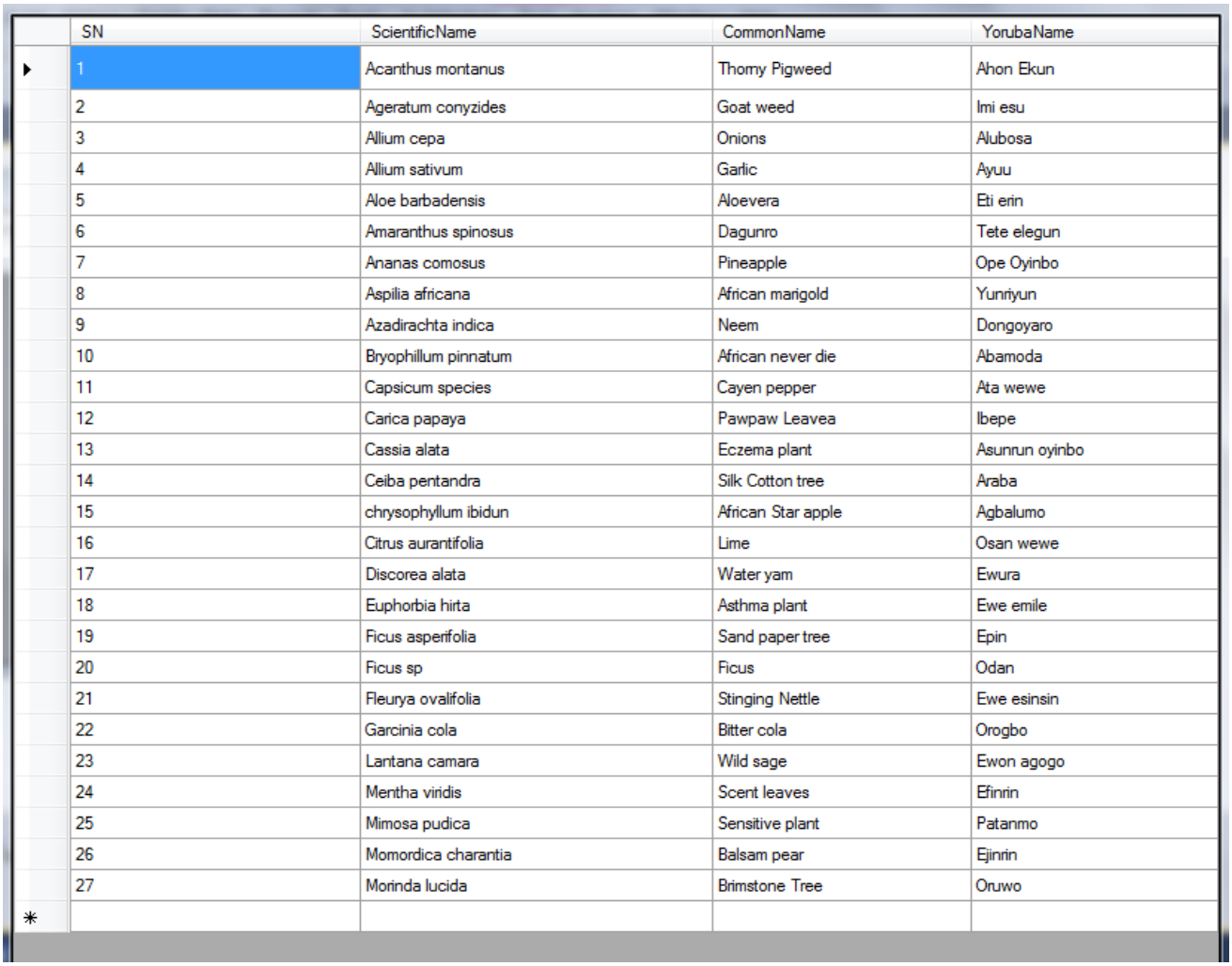
SN	Disease	Request ID	Treatment	Prescription
1	Abdominal pain	Abdominal pain	Juice of aloe vera mix with honey.	Take 3times for 7days
2	Acne	Acne	Boil catnip,lemon grass,garlic,neem,ver...	Take 1 table cup 2times daily
3	Acute dysentery	Dysentery	Chew leaves of Siam weed with urine	every morning for 3days
4	Allergies	Allergies	Boil chickweed,pawpaw leaves,peppe...	Take 1cup 3times daily
5	Arthritis	Arthritis	Boil mistletoe,garlic,thorney pigweed,a...	Take 2times daily
6	Asthma	Asthma	Mix powdered thorny pigweed,garlic,tu...	Take 3times daily
7	Bad Breath (Halitosis)	Bad Breath	Mix powdered garlic,tumeric, ginger & t...	Take 3times daily
8	Baldness	Baldness	Mix Aloe vera juice,onion,horsetail,nettl...	Rubb 3time daily
9	Bedwetting	Bedwetting	Mix powdered plantain,nettle,mstletoe,...	Take 3times daily
10	Bladder Cancer	Bladder Cancer	Mix powdered garlic,tumeric,corn silk,n...	Take 3times daily
11	Breast Cancer	Breast Cancer	same treatment for bladder cancer but ...	3 times daily
12	Bronchitis(Cough)	Cough	Mix powdered garlic,ginger,thorney pig...	Take 3spoon 3times daily
13	Burns	Burns	Apply honey on affected part then che...	3times daily
14	Canker Sores (Cold Sores)	Canker Sores	Mix powdered garlic,ginger,tumeric,pe...	Take 3times daily
15	Cataract	Cataract	Apply Aloe vera juice directly until con...	Twice daily
16	Cervical Cancer	Cervical Cancer	Same treatment to breast cancer but A...	At night
17	Cholera	Cholera	Squeeze scent leaves with little quantit...	Take 3times daily
18	Chronic Obstructive Pulmonary Diseas...	COPD	Mix aloe vera juice with orange.	Take 3times daily
19	Colon Cancer	Colon Cancer	Boilgarlic,tumeric,aloe vera leaves,nettl...	Take 3times daily
20	Congestive Heart Failure (CHF)	Heart Failure	Mix powdered garlic,ginger,thorney pig...	Take 3spoon 3times daily
21	Convulsion	Convulsion	Mix powdered garlic,ginger,tumeric,pe...	Take 2times daily
22	Conjunctivitis(Apollo)	Conjunctivitis	Wash eyes with self urine then applied...	morning and night
23	Dandruff	Dandruff	Wash hair with urine then apply aloe v...	Daily after bath
24	Dehydration	Dehydration	Mix aloe vera juice with orange & nee...	Take with salt 3times daily
25	Depression	Depression	Boil neem leaves,lime,lemon grass,mis...	Take 3times daily
26	Diabetes	Diabetes	Boil onion,garlic,ginger,plantain,mistlet...	Take at night

Figure 6. Showing Ailment medication and prescription



SN	Symptom	Ailment
1	severe pain in stomach, vomitting,unable to stand well	Abdominal pain
2	Swolen gland on skin,red pimples on face & neck	Acne
3	Blood stain on stool,Pains in anus,hard stool	Acute dysentery
4	Body itching,swollen gland,red pimples on the body	Allergies
5	Pains on joints,neck,back,knees,wrist,finger etc	Arthritis
6	Persistent coughing,unable to breath well,sweating	Asthma
7	Bad odour from mouth when talking or breathing	Bad Breath (Halitosis)
8	Hair cutting, dry scalp	Baldness
9	Passing urine on bed during sleeping at night	Bedwetting
10	Severe pain in affected part, weight loss,tiredness,painful urination & bad odour	Bladder Cancer
11	severe pain in breast, weight loss,tiredness,rise in temperature	Breast Cancer
12	Coughing, chest pain,hard breath, mucus with spiit	Bronchitis(Cough)
13	Swollen glands as result of fire or hot water	Burns
14	Difficult in breathing,coughing,headache,sneezing,watery eyes,fever,pains and aches	Canker Sores (Cold Sores)
15	Growth covering the eye,redish eye	Cataract
16	Bleeding from virginal,pains,pieces of wart droping on pants	Cervical Cancer
17	Vomitting, stooling, weight loss, unable to eat	Cholera
18	Difficult stools,slight stomach pain	Chronic Obstructive Pulmonary Disease (COPD)
19	Severe pain in colon, internal bleeding,stools stain wih blood,pale,rise in temperature	Colon Cancer
20	Unable to breath,headache,slight chest pain,pale,weight loss	Congestive Heart Failure (CHF)
21	Fallen down,Dizzness,Abnormal cerebral stimulation,uncontrollable contraction of muscles	Convulsion
22	Redish eyes,unable to open eyes,pains as if stones on eyes	Conjunctivitis(Apollo)

Figure 7. Showing Symptoms with its corresponding ailment



SN	ScientificName	CommonName	YorubaName
1	Acanthus montanus	Thorny Pigweed	Ahon Ekun
2	Ageratum conyzides	Goat weed	Imi esu
3	Allium cepa	Onions	Alubosa
4	Allium sativum	Garlic	Ayuu
5	Aloe barbadensis	Aloevera	Eti erin
6	Amaranthus spinosus	Dagunro	Tete elegun
7	Ananas comosus	Pineapple	Ope Oyinbo
8	Aspilia africana	African marigold	Yunriyun
9	Azadirachta indica	Neem	Dongoyaro
10	Bryophillum pinnatum	African never die	Abamoda
11	Capsicum species	Cayen pepper	Ata wewe
12	Carica papaya	Pawpaw Leavea	Ibepe
13	Cassia alata	Eczema plant	Asunrun oyinbo
14	Ceiba pentandra	Silk Cotton tree	Araba
15	chrysophyllum ibidun	African Star apple	Agbalumo
16	Citrus aurantifolia	Lime	Osan wewe
17	Discorea alata	Water yam	Ewura
18	Euphorbia hirta	Asthma plant	Ewe emile
19	Ficus asperifolia	Sand paper tree	Epin
20	Ficus sp	Ficus	Odan
21	Fleurya ovalifolia	Stinging Nettle	Ewe esinsin
22	Garcinia cola	Bitter cola	Orogbo
23	Lantana camara	Wild sage	Ewon agogo
24	Mentha viridis	Scent leaves	Efinrin
25	Mimosa pudica	Sensitive plant	Patanmo
26	Momordica charantia	Balsam pear	Ejinrin
27	Morinda lucida	Brimstone Tree	Oruwo

Figure 8. Showing Herbal information list available in the database

The evaluation carried out in this work was based on users' assessment to determine the efficacy of the proposed system in terms of ease of usage, reliability and relevance of the system.

The results obtained from the analysis of the respondents' data revealed that the proposed system offers high degree of ease of usage and reliability. Most respondents ascertain that it has a highly efficient emergency system with high relevance to realize immediate response to health symptoms and challenges of individuals. The system's knowledge base was evaluated by some experts who tested the system to query the diseases and the corresponding medications.

Based on the result obtained, the system is capable of assisting herbal practitioner to make an accurate and timely decision-taking, substantial eliminating error in wrong medication and thereby increasing the efficiency of diagnostic skills.

V. Conclusion

With the quest for globalization, we need to have the details about herbs, their uses and the parts used. The advantages of the system as conducted from the usage of users, has proven that this system has its own advantages which provided information about herbs stored in a proper database and it is more appropriate approach compared with traditional way where all the data is written on the paper. Also system is not intended to replace orthodox medication but rather to pave way for the usage of herbal medication through the use of internet anywhere in Nigeria. The system attempts to enhance the effectiveness of herbal medication which has its information in the knowledge base that improves efficiency in decision making. Therefore, the diagnosis made by the user of the system are at least as good as those of human herbal practitioners', since at each point or step the user makes request for medication, the system gives a feedback cure for the ailment. We hope the proposed system would improve the courageous effort of pioneer health practitioner players like OgiHerbs, Yoyo Bitters, slimmer, Yemkem, ,OkoOloyun, Ayodeleetc in Western part of Nigeria. This system can be access anytime and anywhere through both internet and mobile with a dedicated phone number.

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