### ABSTRACT - E-KNOWLEDGE WIRELESS HEALTH CARE SYSTEM

# INTRODUCTION:

OBJECTIVE:

The goal of the wireless prescription system is to improve the efficiency of the healthcare system by reducing the overall time and cost used to create documents and retrieve information and the main feature of Health Consulting system is to provide the browser to get appointments from a doctor through internet instead of going there and fixing an appointment. In Doctor’s side they can view their appointments and prescribe medicine for their patients.

Health Consulting System maintains patient’s prescriptions so that their medical details are always available in Internet, which will be more convenient for the patients. This will be more comfortable for the patient. Patient details and prescriptions are maintained confidentially. This part of project contains single centralized database. That database contains the nine tables. The tables are Patient table, Doctor table, Appointment table, General Prescription table, Recommended Hospital table, Administrator table, Account table, Hospital table, Feedback table. This project is mainly developed to overcome the problems in the existing system by introducing more enhanced and efficient features.

Current technologies such as J2EE Enterprise Edition can be deployed to facilitate easy implementation of wireless services. Healthcare is one of the most information-intensive industries and is evolving rapidly as new information supplants old information.

The main goal of this work is to demonstrate the applicability of the current J2EE architecture combined with the J2ME (J2EE 2 Platform Micro Edition, a small J2EE application environment for handheld devices or other consumer devices with limited resources) technology to support wireless and Web-based services deployed in the healthcare system by designing and implementing a wireless prescription system. It is worthwhile noting that the implementation for the client side was done only for the Palm OS handheld device (due to time constraints). However, during performance testing, we have implemented testing applications for both Palm OS and Windows CE devices to evaluate the entire system’s performance.

MODULE DESCRIPTION:

**Physician:**

**U**ses handheld device to wirelessly issue new prescriptions; retrieves prescriptions by customer’s name or prescription’s unique ID.

* Administrator does Doctor registration.

* Every Doctor will have their own unique Id and Password with which, they will login to this site.
* After they logged into this site. They will have their main form. From there by choosing the link, they can see their appointments. He/she can see their new appointments and they can also see the previous appointments.
* After attending the patient, the Doctor selects a particular patient Id for prescription. In the prescription form, the Doctor will enter the detail about the prescription and give to the particular patient like specifying Patient condition, Kind symptom and dosage about the medicine.
* For some patient, the Doctor may need to recommend some other Hospitals for future treatments for this, the Health Consulting System site provide other option for Doctors. Here, the Doctor will redirect to Hospital recommendation Form.
* In Hospital Recommendation Form, the Doctor searches for a Hospital, which will be suitable for a particular Patient who needs Hospitalization for future treatments.

After choosing the Hospital, the Doctor will send the details about the Patient to the Person who is in charge of the Recommended Hospital through mail and the patient will also receive the mail about the Hospital preferred by the Doctor for his/her future treatments

**Pharmacy:**

**R**etrieves a customer’s prescription from a centralized database server through the Internet; fills or refills the customer’s prescriptions; updates the prescription’s status; adds a new refill history record into or produces a new one in the database server.

**Administrator:**

**M**aintains the physician and pharmacy database through the Internet.

In this system, a wireless LAN is required to provide wireless communication service for handheld devices used by the physicians and the centralized database server needed to store all related information. In our wireless prescription system, a J2EE server is used to provide middleware support for the entire system.

* A Genuine person from the Administrator side will collect information about the Doctor like his/her Qualification, specialization, Address, etc for Registration. After filtering the invalid data, the Doctor Details will be uploaded in Health Consulting System site.
* Before uploading their details the Administrator will send mail to the Doctor’s E-mail ID about his/her Id and Password.
* The Administrator can also add new Hospital which is specified by the Doctors while recommending new Hospitals for patient for further or future treatments.
* The Administrator can view the Account information and can also view the suggestion (feedbacks) given by different users of this site.
* The Administrator is the one, who updates latest Health Tips provided in this site.

**PATIENT MODULE:**

* Everyone needs to have Medical attention at any time. So we allow every user to register freely at any time.

* The user does registration by specifying their details like His/Her Name, Contact Number, Address, and Mail Id etc. After validation the user will receive a message regarding his/her membership.

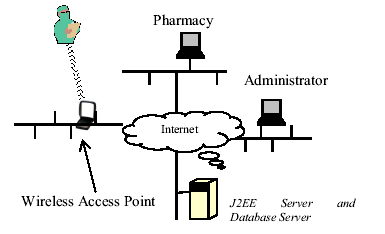
* After registration the user can Login to this site with his/her Unique Id, which is provided by E-Knowledge in Health Care System and password.
* To get an appointment from a doctor we need the user to pay some minimum amount through credit card/account.
* The Doctor list is categorized by his/her specialization and Location like HEART, SKIN CARE, CHILD CARE etc. and T.NAGAR, VALASARAWAKKAM, KODAMBAKKAM respectively. So that the user can easily access the doctor for his/her treatment.
* The user can fix Appointment with a particular doctor by specifying the time, which is convenient for them. After this they will be shown a confirmation message about the timing they preferred.

* A patient visit the doctor at specified timing as per the appointment timing. E-Knowledge in Health Care System maintains the prescription given by the doctor for future use. Patient can view their prescription any time.

* Patients can cancel their appointments within a time limit. The time limit is about two hours from the time they had registered their appointments and their Money will be refunded.

**GENERAL USER MODULE:**

* General Users are those who have not registered in this site. They can view general information about the Doctors.
* They view the Health Tips.
* They can give their suggestion about this site.
* They can register themselves and become a member of Health Consulting System.



**Figure 2. Overall architecture of the wireless prescription system.**

**3 PROBLEM DEFINITION**

# 3.1. SYSTEM ANALYSIS

### FEASIBILITY STUDY

During the feasibility study, the feasibility of the project – the likelihood of the proposed system is analyzed.

The feasibility study was carried out on the overall integrated package. Three key consideration in involved in the feasibility analysis are Operational, Technical and Economical.

### Operational Feasibility

The main objective here is to find out whether

* The system will work once it is developed and installed.
* There is sufficient support for the project from the management.
* The current business methods are acceptable to the users.

An investigation is conducted and as a result the following conclusions are derived.

* There is sufficient support form the managerial level
* The current methods are done manually and take lot of time.
* The persons involved in the current working system are met and discussions are held with them to evolve a system with which they have good participations and interest.

### Technical feasibility

Technological feasibility analyses the following areas.

* Technology and manpower is available are not.
* Capacity to hold the data that is required to use the new system.
* Provision to respond to users regardless of their number and location.
* Provision for further expansion.
* Guarantee of accuracy, reliability, ease of access and data security.

An investigation is conducted and as a result the following conclusions are derived.

* The necessary technology to implement the proposed system is available in the organization.
* Main hardware equipment such as computers with the required Capacities is also available.

Hence the system is technically feasible.

### Economical Feasibility

Issues to be considered in the economical feasibility are

* Financial benefits must equal or exceed the costs.
* The solution should be cost effective.
* Must be worth to pursue the project.

**EXISTING SYSTEM**

From the analysis of information regarding the Health consulting system we find that there are a lot inconveniences, so we proposed a new system that will overcome all the drawbacks in the existing system by considering the following factors:

* Time Consumption
* Inefficiency
* Cost Consumption

**PROPOSED SYSTEM**

* Eliminate the drawbacks in the existing system and to increase the performance of the existing system.
* Reliable
* Secure
* Well efficient
* Update everyday new incoming changes
* Less cost
* Eliminate time delay

# 4 SYSTEM SPECIFICATION

# H/W System Configuration :

# Processor - Pentium –III

Speed - 1.1 Ghz

RAM - 256 MB(min)

Hard Disk - 20 GB

Floppy Drive - 1.44 MB

Key Board - Standard Windows Keyboard

Mouse - Two or Three Button Mouse

Monitor - SVGA

# 4.2 S/W System Configuration

* Operating System **:**Windows95/98/2000/NT4.0.
* Application Server  **:** Tomcat5**.0**
* Front End  **:** HTML, Java.
* Scripts  **:** JavaScript.
* Server side Script **:** Java Server Pages.
* Database  **:** MySql.
* Database Connectivity **:** JDBC.