PATHOLOGICAL LABORATORY MOBILE APPLICATION- pLAB

Mrs. Shraddha Khonde, Mr. Shubham Meshram, Miss. Surabhi Verma, Miss.Varsha Kawade, Miss. Amruta Shankhe

Assistant Professor, BE Student
Dept. of Computer Engineering , MESCOE ,Pune-01
amruta.shankhe@rediffmail.com

Abstract— **The first thing we ought to recognize is that mobile is now part of the fabric -every day in everybody's life. So if one is not looking at mobile solutions, then one is not really looking at all solutions. Many factors influence the depth, breadth and speed of health care's badly needed transformation, as costs escalate, the global population ages and the developing world demands better and more available access to care. In many industries, smart mobile devices and their applications have transformed the way people live, work and play. This is because mobile devices act as the linchpin for the other technology megatrends, delivering into people's hands the critical information and insight they need in a given moment, wherever they are. Mobile Health Care is the integration of mobile computing and health monitoring. It is the application of mobile computing technologies for improving communication among patients, physicians, and other health care workers.**

Index terms- **Search App, Cost Effective,Detailed view, Cost Cutting Initiatives, Managing Physicians,Technology MegaTrend.**

I. Introduction

Nowadays there has been a boost in Mobile technologies and improvising its use in various fields. First and foremost, mobile healthcare can improve geographic coverage by providing information and connectivity to healthcare professionals anytime and anywhere.

Medical is one such mandatory field which is why mHealth has become a crucial aspect of this field. Now a days people prefer having services that can be managed in a go. The application of mobile computing to healthcare has typically not been as extensive that of other technologies, such as medical imaging. Moreover, as society becomes increasingly mobile in almost all aspects of life, the expectation and requirement for a supporting healthcare service will, no doubt, increase in parallel.

mHealth solutions cover various technological solutions, that among others measure vital signs such as heart rate, blood glucose level, blood pressure, body temperature and brain activities. Prominent examples of apps are communication, information and motivation tools, such as medication reminders or tools offering fitness and dietary recommendations.

A mobile app providing such functionalities will not only be a boon for the society but will in turn prove to be one of the powerful features of the same. Mobile applications are specifically written for use on mobile devices and these may be general applications or domain specific.

Mobile computing can be broadly described as computing technology, comprising software, hardware and communications specifically associated with mobility. The challenge of integrating medical equipment for monitoring patients' health goes beyond the economic and social aspects, i.e. deals with aspects related to technology**,** infrastructure and even technology acceptance by institutions, physicians and society, in general.

The advancement of mobile applications and wireless technologies for communication between users, machines communication enabling autonomous components to be interconnected and controlled remotely, with low-cost, scalable and reliable technologies enabled the interconnection of medical equipment and many other wireless mobile devices, such as smart phones in order to enable efficient contact with patients, clinicians that are responsible for the health of several patients.

The development of mobile computing can be seen as one of evolution as well as a revolution. The goal of mobile health care is to provide health care services to anyone at any time, overcoming the constraints of place, time and character. Mobile health care takes steps to design, develop and evaluate mobile technologies that help citizens participate more closely in their own health care. The patients will participate in the health care process by their mobile devices and thus can access their health information from anywhere any time.

Mobile terminals can access information wirelessly from the home server or can search for data from the integrated databases available with the specific pLabs. It is widely expected that m-health will become increasingly important in e-health.

The provision of effective emergency health care can prove essential for patient's recovery Recent advances in mobile communications are enabling the use of mHealth systems at anywhere and at any time. Mobile computing describes a new class of mobile computing devices which are becoming omnipresent in everyday life. Handhelds, phones make information access easily available for everyone from anywhere at any time. Mobile health (hereafter "mHealth") covers "*medical and public health practice supported by mobile devices, such as mobile phones, patient monitoring devices, personal digital assistants (PDAs), and other wireless*

devices". mHealth is an emerging and rapidly developing field which has the potential to play a part in the transformation of healthcare and increase its quality and efficiency.

II. LITERATURE REVIEW

An Overview of Recent Health Care Support Systems for eEmergency and mHealth Applications

Advances in mobile communications and medical technologies facilitate the development of emerging mobile systems and applications for healthcare. The objective is to provide an overview and the current status of mobile health care systems (mHealth) and their applications for Emergency healthcare support (eEmergency)

The application of mobile computing and technology to health care services

Mobile computing and technology is becoming prevalent in many aspects of private life and public services. This paper presents a discussion of the technology and its application in context of the UKs health care service, and outlines some potential benefits that may result from its integration into existing information systems and architectures. The additional component of mobility is believed to provide value to health care services, information systems and ultimately the patient's experience.

Emerging Mobile Communication Technologies for Health: Some Imperative notes on m-health

The next generation of "wireless e-health technologies" is a new and evolving topic in the areas of telemedical and telecare systems. These technologies involve the exploitation of mobile telecommunication and multimedia technologies to provide better access to healthcare personnel on the move, by removing the key disadvantage of trailing wires in current systems. These technologies provide equal access to medical information and expert care by overcoming the boundaries of separation that exist today between different users of such medical information.

A great benefit to all users will be a more efficient use of resources and far greater location independence.

Wireless Telemedicine Systems: An Overview

Rapid advances in information technology and telecommunications, and more specifically wireless and mobile communications, and their convergence (telematics) are leading to the emergence of a new type of information infrastructure that has the potential of supporting an array of advanced services for healthcare

III. SYSTEM ARCHITECTURE
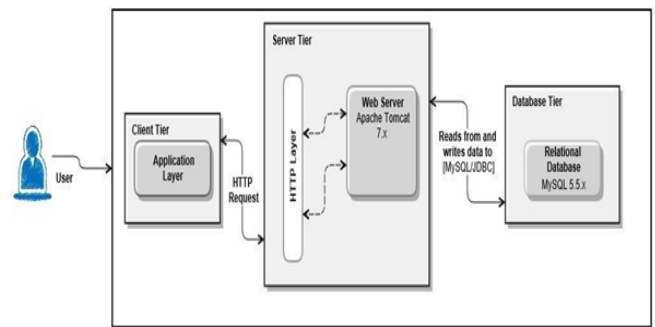
The system architecture basically represents a 3 tier architecture :

1) Client tier: This tier wll represent the user side. All the user input's will be taken here.
2) Server tier: This will manage all the administration related tasks. This will act as a communication tier between client and the database.
3) Database tier: It will contain all the information of the already registered user's as well as the names of all the test's and their pre-requisites.

IV. MODULES AND FUNCTIONS:

1. Welcome Page:
This will be an Introduction page which will provide a very little detail about the App.
2. TestList:
This Screen will provide a list of various test that are conducted in general a user will be allowed to select on or more tests .Here we will be providing an upload button to upload the prescription provided by the physician.
3. ListLabs:
This Screen will list out the various pathological labs according to the distance in the ascending order.
4. Login:
This Screen will help the user to login once the lab has been selected.A gmail account will be mandatory
at the time of login. 5.Scheduling:
Here the user will be allowed to choose a timeslot available at the selected lab according to his convenience.This screen will also provide the user with the cost and the prerequisites for the same.
6.Thankyou:
This will ensure the booking of the slot.

mHealth has become a crucial aspect of this field This app not only provides the user with the best service but also provides one with reasonable and efficient service. Providing an effective and efficient outcome .It can be seen from the above that the use of mobile and wireless technology can result in new opportunities, both technical and non-technical, for enhancing many aspects of the fundamental processes that govern the successful operation of a system such as the health service.

This would be anticipated from any supporting technology but more so from mobile and wireless technology because of the manner in which it can radically alter the way in which a system functions.

There is no doubt that that mobile and wireless technology is permeating into many aspects of life, including the health service, and will continue to do so both through choice and requirement.

VII. CONCLUSION

The whole system of mobile health care using mobile places forward some future works such as finding the effective data in the most informative manner with minimal storage and user interaction, modeling of data so that the system will not represent all the data but only relevant information thus saving memory. This paper demonstrates an intelligent system for mobile health monitoring.

The demands of a modern health care service and expectations of patients will, no doubt, continue to fuel its adoption. some recommendations that will help the wider spread of health systems are the following:

(i) Appointment Booking
(ii) Door step services
(iii) Door step Pharmacy services

VIII. ACKNOWLEDGEMENT

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V. ALGORITHM

The Dijkstra Algorithm finds the shortest path from a source to all destination in a directed graph (single source shortest path problem). Dijkstra partitions all nodes into two distinct sets. Unsettled and settled. Initially all nodes are in the unsettled sets, e.g. they must be still evaluated. A node is moved to the settled set if a shortest path from the source to this node has been found.

Foreach node set distance[node] = HIGH SettledNodes = empty

UnSettledNodes = empty

Add sourceNode to UnSettledNodes distance[sourceNode]= 0
while (UnSettledNodes is not empty) { evaluationNode=getNodeWithLowestDistance(UnSettledNodes) remove evaluationNode from UnSettledNodes
add evaluationNode to SettledNodes evaluatedNeighbors(evaluationNode)
}
getNodeWithLowestDistance(UnSettledNodes){
find the node with the lowest distance in UnSettledNodes and return it } evaluatedNeighbors(evaluationNode){
Foreach destinationNode which can be reached via an edge from evaluationNode AND which is not in SettledNodes {
edgeDistance = getDistance(edge(evaluationNode, destinationNode)) newDistance = distance[evaluationNode] + edgeDistance
if (distance[destinationNode] > newDistance) { distance[destinationNode] = newDistance
add destinationNode to UnSettledNodes }
}
}

VI. PURPOSE

The mobile app mainly facilitates the combined usage of emerging technology trends of mobile and the medical which is reason. Medical is one such mandatory field which is why

[3] The application of mobile computing and technology to health care services

Khawar Hameed School of Computing, Staffordshire University, Stafford, Beaconside ST18 0DG, UK

[4] Study on Mobile Healthcare System

K. Kiran Reddy P.lalith Samanth Reddy Dr.P.Bhaskara Reddy Assoc.Prof, B.Tech final year, Director, MLRIT,

Hyd, India IARE,Hyd.INDIA MLRIT,Dundigal,Hyd, India

[5] Privacy in Mobile Technology for Personal Healthcare

SASIKANTH AVANCHA and AMIT BAXI, Intel Labs Bangalore DAVID KOTZ, Dartmouth College

[6] Intelligent Mobile Health Monitoring System (IMHMS)

Rifat Shahriyar1, Md. Faizul Bari2, Gourab Kundu3, Sheikh Iqbal Ahamed4, and Md. Mostofa Akbar5 Bangladesh University of Engineering & Technology1, 2, 5, University of Illinois at Urbana-Champaign3, Marquette University4rifat@cse.buet.ac.bd1,aizulbari@cse.buet.ac.bd2,gourab.kundu08@gmail.com3, sheikh.ahamed@marquette.edu4, mostofa@cse.buet.ac.bd5