

A Project Report
on
E-HEALTH CARE SYSTEM

*Submitted in partial fulfillment of the
requirement for the award of the degree of*

**Bachelor of Technology in Computer Science and
Engineering**



(Established under Galgotias University Uttar Pradesh Act No. 14 of 2011)

**Under The Supervision of
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**SCHOOL OF COMPUTING SCIENCE AND
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CANDIDATE'S DECLARATION

I/We hereby certify that the work which is being presented in the project entitled “**E-HEALTH CARE SYSTEM**” in partial fulfillment of the requirements for the award of the **Bachelor of Technology in Computer Science and Engineering** submitted in the School of Computing Science and Engineering of Galgotias University, Greater Noida, is an original work carried out during the period of **JULY-2021 to DESEMBER-2021** and Year, under the supervision of **Ms.Aanchal Vij Assistant Professor , Department of Computer Science and Engineering of School of Computing Science and Engineering , Galgotias University, Greater Noida**

The matter presented in the project has not been submitted by me/us for the award of any other degree of this or any other places.

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This is to certify that the above statement made by the candidates is correct to the best of my knowledge.

Supervisor Name
(Ms.Aanchal Vij)
(Assistant Professor)

CERTIFICATE

The Final Thesis/Project/ Dissertation Viva-Voce examination of **Md Akhtar mansuri - 19SCSE1010119, Masum Raza-19SCSE1010138** has been held on _____ and his/her work is recommended for the award of **Bachelor of Technology in Computer Science and Engineering.**

Signature of Examiner(s)

Signature of Supervisor(s)

Signature of Project Coordinator

Signature of Dean

Date:

Place: Greater Noida

Abstract

One of the basic vitalities of good living is quick access to essential services like health care. But many times it could mean a condition of life and death for an individual who is unable to get the access to these services. Thus an important part of social sector development is incomplete without adequate health care facilities. The quality of human health is the foundation upon which the realization of life goals and objectives of a persona, the community or nation as whole depends. It is both an end and means of development strategy. The relationship between health and development is mutually reinforcing- while health contributes to economic development, economic development, in turn, tends to improve the health status of the population in a country. India as a nation has been growing economically at a rapid pace particularly after the advent of New Economic Policy of 1991. However, this rapid economic development has not been accompanied by social development particularly health sector development. Health sector has been accorded very low priority in terms of allocation of resources. Public expenditure on health is less than 1 per cent of GDP in India. This research paper focuses on the current status of the Indian healthcare industry, the challenges faced plus the comparison of few selected Indian states based on health indicators. Furthermore comparison of India with some developed and developing countries is also employed in order get the clear picture of the health sector. In order to boost the development line, some opportunities in the health care industry are also discussed and necessary policy implications. Regarding in this connection India lags behind in regard of health improvement as compared to U.S.A, Canada, China, and Brazil, but contrary to other developing countries like Pakistan, Bangladesh the scenario is better with life expectancy, Mortality ratios, health care spending speak volumes about the healthcare status. When analyzed through the prism eye, within India there are large disparities amongst states in achieving health outcomes as well. Before liberalization the improvement was at a snail's pace, but after liberalization the whole picture changed because the key initiatives to improve the current healthcare standard a two prong strategy focusing on the infrastructure needs and the technology solution were implemented, which resulted in the healthy scenario of the healthcare industry. Healthcare sector, a leading weapon as the contributor to GDP (approx.8%) is thus the matter to be deeply looked into, so that golden harvest is reaped.

Key words:

Healthcare, Information, Diagnosis, Prescription, Restriction and Service.

Introduction

Healthcare is a field in which accurate record keeping and communication are critical and yet in which the use of computing and networking technology lags behind other fields. Healthcare professionals and patients are often uncomfortable with computers, and feel that computers are not central to their healthcare mission, even though they agree that accurate record keeping and communication are essential to good health care. The present day health care process is quite tedious and time consuming.

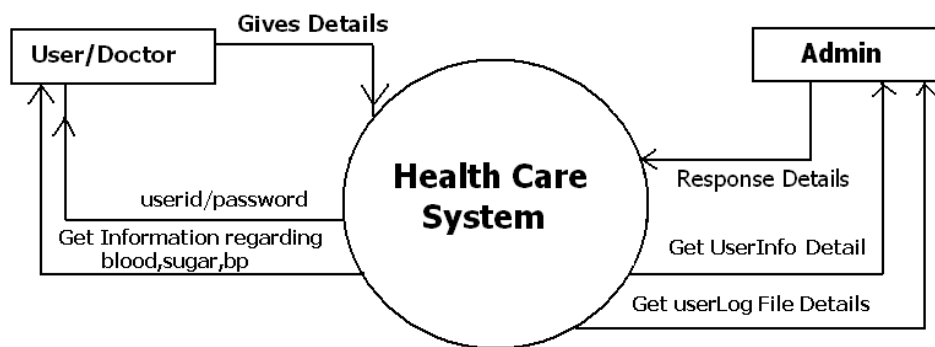
This is due to the elongated series of activities involved in the process of initial patient registration, seeing a physician and filing and collecting prescriptions. Part of the problem is also due to the rather poor and outdated data storage and retrieval system. There is also a lot of paper work involved which put a lot of important records in danger of being destroyed and with a very poor security. As a new patient, visiting the hospital for the first time, you need to undergo a registration process which basically involves buying a patient card, filling your information on it and then submitting it back to get filed.

A file will be opened and used to store your records. Files of waiting patients will be retrieved by the patient using his patient card. The file will then be taken to a nurse who will add it to the waiting list. The patient will then wait in line until it is his turn to see the physician. The physician adds new diagnosis to what already exist in the file and prescribe the medications necessary. The patient then takes the prescription to the pharmacy. Any discrepancies with the prescription document like inability to understand the handwriting has to be taken back to the physician.

CONTEXT DIAGRAM

The context diagram is the most abstract data flow representation of a system. It represents the entire system as a single bubble. This bubble is labeled according to the main function of the system. The various external entities with which the system interacts and the data flows occurring between the system and the external entities are also represented.

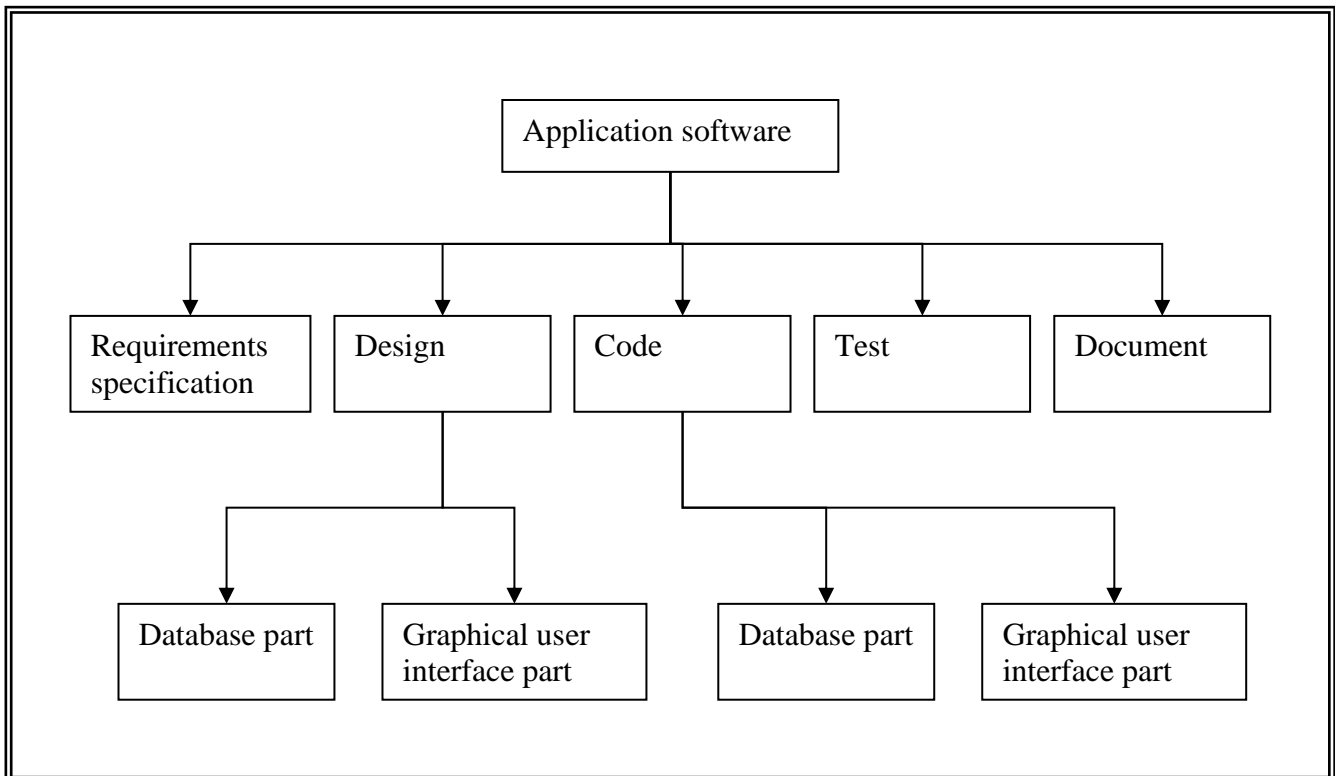
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WORK BREAKDOWN STRUCTURE

Work breakdown structure is used to decompose a given task set recursively into small activities. WBS provides a notation for representing the major tasks needed to be carried out in order to solve a problem. The root of the tree is labeled by the problem name. Each node of the tree is broken down into smaller activities that are made the children of the node. Each activity is recursively decomposed into smaller sub-activities until at the leaf level; the activities require approx. two weeks to develop. If a task is broken down into a large number of very small activities, these can be distributed to a large number of engineers. If the activity ordering permits, the solutions to these can be carried out independently. Thus, it becomes possible to develop the product faster.

The following figure represents the WBS of application software:



DESIGN METHODS

- Structured design techniques are used to design the software.
- An activity of all phases of a project is the walk-through. It is an interchange of ideas among the team members. In design walk-through, the purpose is to recognize as many problems in the software as possible while they are still “paper tigers”
- Activity diagram are used then to define the behavior of mechanism.
- Layering has been done to refine the architecture. Initially, two layers are introduced, system layer and application layer.
- Demo version is created on these lines of design techniques to demonstrate the feasibility of design methods.
- Database design is according to the implementation of algorithms.

FUTURE APPLICATIONS

- Providing the On-Line Chat facility to users to concern the doctor for immediate response.
- Providing the community for specialize doctors for specific diseases, and share the information in the form of Blogs, Photos, Videos, discussions in various new researches in medical science.
- Nurturing the dream of providing Email account facility to users so they can feel the independence of mail account at the same site.
- In future it will provide information of doctors with their specialization in the local area of user/patient.
- In future we would provide the facility for online payment and implement Secure Socket Layer (SSL)

DEPENDENCIES

- It doesn't matter how efficiently the application works, if the bandwidth is not sufficient the transaction will take more time than expected.
- .Net Framework for execution environment and ADO.NET Provides for database connectivity.
- IIS server is required for the application.
- Although this software is architecturally independent but following hardware resources are required. For i.e. any IBM compatible PC or any other workstation with mouse support and relevant software

Conclusions

Computer technology changes every day. New technologies are emerging every minute and therefore systems should be made with the provision of making updates to enhance the system's existing functionalities and to add new functionalities. For the e-Healthcare system, there are already a number of enhancements that are considered to be incorporated into the system. Real-time communication between doctors, patients and pharmacists is an important feature that should be added to the system in the future. Patients can have access to realtime assistance from their doctors and pharmacist can easily confirm prescriptions with the doctor that issued it. Integration with healthcare devices is also an important functionality that will find its way into the system in the nearest future. Some patients have devices on their bodies performing important activities. These devices need to be integrated with the system to ensure adequate supervision and maintenance. Alert and notification is another important feature that will help the users in doing their jobs. Healthcare work is much and therefore doctors and pharmacist will need reminders to alert them of some work or notifications to notify when a new work is available. For example a notification alert is sent to a doctor when a new patient is added to the waiting list

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