

# **Project On**

# **Hospital Management System**

MCA Sem-2<sup>nd</sup>

Sec-A

OOPS Project

**Submitted to:- Dr. Chitra baskar mam**

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**HOSPITAL-** A hospital is a health care institution providing patient treatment with specialized staff and equipment. Hospitals are usually funded by public sector by health organisations (for profit or non-profit), by health insurance companies, or by charities, including direct charitable donations. Hospitals have a range of departments (e.g., surgery, and urgent care etc).

**HOSPITAL MANAGEMENT SYSTEM-** A hospital management system is an information system that manages the aspects of a hospital. This may include the administrative, financial, and medical processing. It is an integrated end-to-end Hospital Management System that provides relevant information across the hospital to support effective decision making for patient care, hospital administration and critical financial accounting, in a seamless flow. This program can look after Inpatients, OPD patients, records, database treatments, status illness etc. It also maintains the hospital info such as ward id, Doctor in Charge, Department administering etc. It also looks after doctor and staff records.

**NEED OF HMS :**

1. Minimized documentation and no duplication of records.
2. Reduced paper work.
3. Improved Patient Care
4. Better Administration Control
5. Faster information flow between various departments

- 6. Smart Revenue Management
- 7. Effective billing of various services
- 8. Exact stock information

### **Software Requirement Specification (SRS) :**

A Software requirements specification (SRS), a requirements specification for a software system, is a complete description of the behaviour of a system to be developed and may include a set of use cases that describe interactions the users will have with the software. In addition it also contains non-functional requirements. Non-functional requirements impose constraints on the design or implementation (such as performance engineering requirements, quality standards, or design constraints).

**Introduction:** The SRS is produced at the culmination of the analysis task. The function and performance allocated to software as part of the system engineering and refined by establishing a complete information description, a detailed functional description, a representation of system behaviour, indication of performance requirements and design constraints, appropriate validation criteria and the other information related to requirements. The SRS is technical specification of requirement of Hospital Management system. This specification describes what the proposed system should do without describing how it will do it. It also

describes complete external behaviour of proposed system. 1

**Purpose:-** The main purpose of our system is to make hospital task easy and is to develop software that replaces the manual hospital system into automated hospital management system. This document serves as the unambiguous guide for the developers of this software system.

**Scope:-** The document only covers the requirement specification for the hospital management system. This document does not provide any references to the other components of the hospital management system. All the external interfaces and the dependencies are also identified in this document.

**Feasibility Study:-** The overall scope of the feasibility study is to provide sufficient information to allow a decision to be made as to whether the hospital management system project should proceed and so, its relative priority in the context of the other existing hospital management system. The feasibility study of this project had undergone through various steps which as describe as under:

- a) Identify the origin of the information at different level.
- b) Identify the expectation of user from computerized system.
- c) Analyze the drawback of existing system.

**Overview:-** Hospital Management System is a process of implementing all the activities of the hospital in a computerized automated way to fasten the performance.

This project is to maintain the patient details and lab reports  
We can also manually edit any patient details.

## **OVERALL DESCRIPTION :**

**Product perspectives:-** This project gives the procedural approach how a patient gets treatment, details about date of treatment and other criteria like room allocated, lab reports, treatment and medicine taken.....etc.

**Product Function:-** The data represented in hospital management application will perform the following major functions:-

Patient Details: - It includes inpatient and outpatient details.

Tasks:- It includes the various tasks which are used in hospital.

**User Characteristics:-** This software is developed such that total appearance of the product to make it more user friendly. The operator will be provided with login id and password. General users with basic computer skills can use this software.

**General Constraints:-** Any update regarding the patient's information from the hospital are to be recorded to have updated and correct values.

**SPECIFIC REQUIREMENTS** : It describes all the details that the software developer need to know for designing and developing the system. This is typically the largest and most important part of the document.

### **External Interface Requirements:-**

**User Interface:-** User interface is designed in a user friendly manner and the user, in another end he has to give the order, for that he will interface with keyboard and mouse.

### **Hardware Interface:-**

- 1) OS – windows
- 2) Hard disk – 80 GB
- 3) RAM – 2 GB
- 4) Keyboard – Standard QWERTY keyboard for interface
- 5) Mouse – Standard mouse with 2 buttons

### **Software Interface:-**

- 1) Front end – OOP using C++
- 2) OS – Net Beans IDE 6.9.1

**Communication Interface:-** Windows

## **Functional Requirements:-**

**Administration module:-** This module enables the user to insert, update, view, search and delete the patient information.

### **Patient module:-**

Data Members :- Patient Id, Name, Age, Sex, Blood Group, Marital Status ,Address, Phone Number.

**Task module:-** This module is used by system admin to manage the system. It has following sub modules.

Add New Patient :- This module is used to add a new patient.

View Details :- This module is used to view the details of a previously admitted patient.

Search :- This module searches the record of desired patient using his ID, Name, City or Blood Group.

Delete :- This module deletes the entry of a patient.

**Performance Requirements:-** The capability of the computer depends on the performance of the software. The software can take any number of input provided the database size is large enough. This would depend on the available memory space.

**Design Constraints:-** This will help the doctors or users to view the records of the patients immediately whenever necessary. This software also has the ability to add, update

and delete the record whenever needed. This project will help to smoothen the process of the hospital activities.

**SYSTEM FEATURES:** The users of the system should be provided the surety that their account is secure. This is possible by following:

User authentication and validation of members.

Proper monitoring by the administrator which includes account status.

Privacy of personal details of patients maintained properly.

**ATTRIBUTES:**

**Reliability:** This application is a reliable product that produces fast and verified output of all its processes.

**Availability:** This application will be available to use and help them to carry out their operations conveniently.

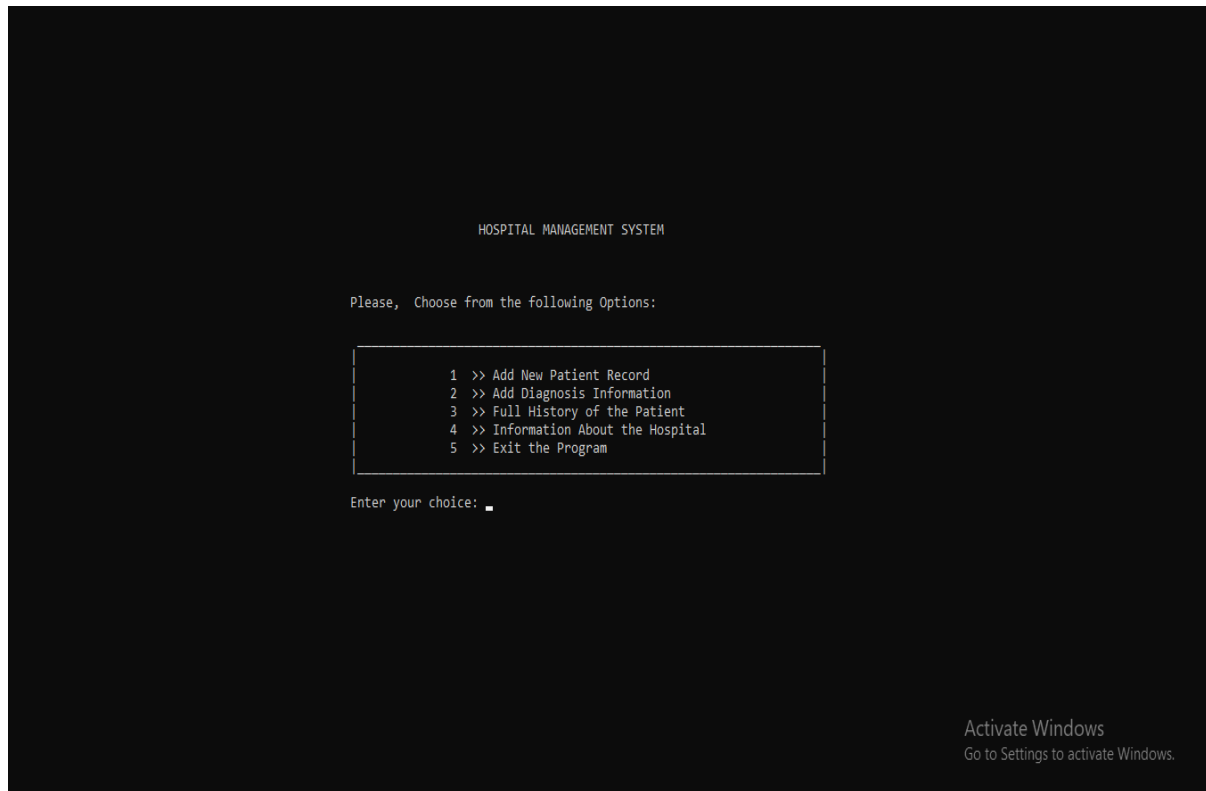
**Security:** The application will be password protected. User will have to enter correct username, password and role in order to access the application.

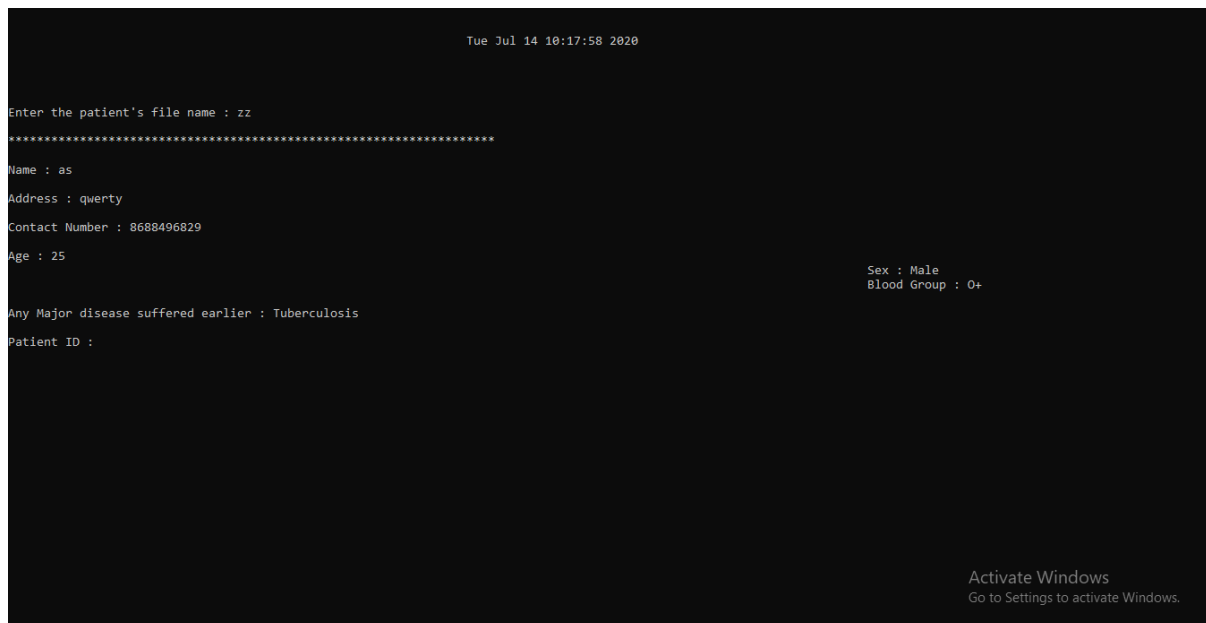
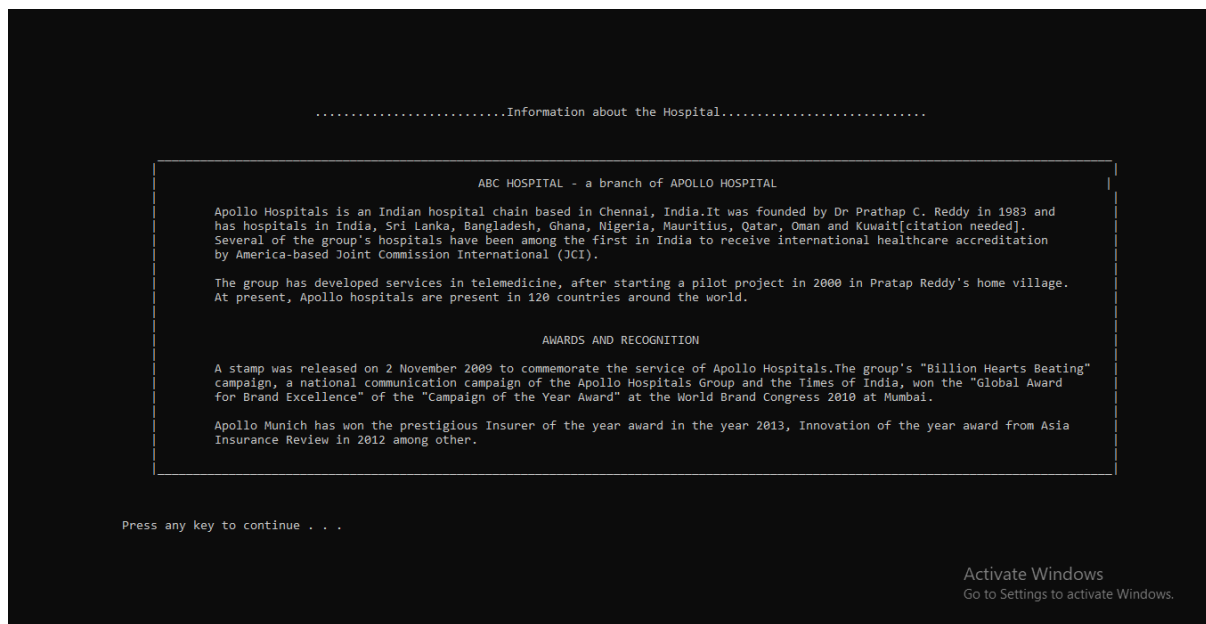
**Maintainability:** The application will be designed in a maintainable manner. It will be easy to incorporate new requirements in the individual modules.

**Portability:** The application will be easily portable on any windows-based system that has oracle installed.



## Screenshots from the application:





**CONCLUSION:-** The project Hospital Management System (HMS) is for computerizing the working in a hospital. It is a great improvement over the manual system. The computerization of the system has speed up the process. In the current system, the front office managing is very slow. The hospital managing system was thoroughly checked and

tested with dummy data and thus is found to be very reliable. The software takes care of all the requirements of an average hospital and is capable to provide easy and effective storage of information related to patients that come up to the hospital. It generates test reports and also provides the facility for searching the details of the patient. The system also provides the facility of backup as per the requirement.

**FUTURE ENHANCEMENTS:** The proposed system is Hospital Management System. We can enhance this system by including more facilities like pharmacy system for the stock details of medicines in the pharmacy. Providing such features enable the users to include more comments into the system.

**LIMITATIONS:** The size of the database increases day-by-day, increasing the load on the database back up and data maintenance activity.

Training for simple computer operations is necessary for the users working on the system.

### **REFERENCES:-**

- 1) The C++ Programming Language-Bjarne Stroustrup
- 2) OOP in C++ – E Balagurusamy

## **WEB REFERENCES:**

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2. [www.geeksforgeeks.com](http://www.geeksforgeeks.com)
3. [www.stackoverflow.com](http://www.stackoverflow.com)