Bahria University,

Karachi Campus



LAB EXPERIMENT NO.

\_\_\_04\_\_\_

LIST OF TASKS

|  |  |
| --- | --- |
| TASK NO | OBJECTIVE |
| 01 | Write SRS for your project and submit it. |
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Submitted On

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Software Requirements Specification

for

Hospital Management System

Version 1.0 approved.

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Table of Contents

Table of Contents ii

Revision History ii

1. Introduction 1

1.1 Purpose 1

1.2 Document Conventions 1

1.3 Intended Audience and Reading Suggestions 1

1.4 Product Scope 1

1.5 References 1

2. Overall Description 2

2.1 Product Perspective 2

2.2 Product Functions 2

2.3 User Classes and Characteristics 2

2.4 Operating Environment 2

2.5 Design and Implementation Constraints 2

2.6 User Documentation 2

2.7 Assumptions and Dependencies 3

3. External Interface Requirements 3

3.1 User Interfaces 3

3.2 Hardware Interfaces 3

3.3 Software Interfaces 3

3.4 Communications Interfaces 3

4. System Features 4

4.1 System Feature 1 4

4.2 System Feature 2 (and so on) 4

5. Other Nonfunctional Requirements 4

5.1 Performance Requirements 4

5.2 Safety Requirements 5

5.3 Security Requirements 5

5.4 Software Quality Attributes 5

5.5 Business Rules 5

6. Other Requirements 5

Appendix A: Glossary 5

Appendix B: Analysis Models 5

Appendix C: To Be Determined List 6

**Task No. 1:** Write SRS for your project and submit it.

**Solution:**

# Introduction

## Purpose

A hospital management system is software designed to manage all the areas of a hospital such as medical, financial, administrative and the corresponding processing of services.

## Document Conventions

Uppercase is used to denote abbreviations.

## Intended Audience and Reading Suggestions

Developers, testers, and project managers. It could also include stakeholders in other departments, including leadership teams, sales, and marketing.

## Product Scope

Daily functions like patient registration, managing admission and overall management of various departments can be easily performed with higher accuracy after the installation of hospital software.

✓ The proposed software product is the Hospital Management System (HMS). The system will be used to get the information from the patients and then store that data for future usage.

# Overall Description

## Product Perspective

This project gives the procedural approach how a patient gets treatment, details about date of treatment and finally depending on different criteria like room allocated, lab reports, treatment and medicine taken…. Etc., how billing is calculated. During billing health care facility is also considered.

## Product Functions

**Patient Module:**

1. Add patients.
2. Update Info.
3. Delete and Search patients.
4. Assign Patient ID

**Doctor Module**:

1. Update or add doctors.
2. Search availability

**Accounting**:

1. View daily payments.
2. Transfer salaries
3. Expenses manage.
4. Calculate sales tax.
5. Print salary sheets

**Pharmacy**:

1. Order Medicines
2. Stock management
3. Generate Sales Bills
4. Add/update medicines.

**Laboratory:**

1. Search Reports
2. Request Labs Equipment
3. Upload Reports Online
4. Print Reports

**Employees Module:**

1. Add/Update Information.
2. Assign Employee ID

## User Classes and Characteristics

The system will be used in the hospital. The administrators, front-desk staff will be the main users. Given the condition that not all the users are computer-literate. Some users may have to be trained in using the system.

## Operating Environment

Software requirements

* Windows 7 or above operating system
* JRE 1.8
* MySQL server

Hardware Requirements

* Core i3 processor
* 2GB Ram (4GB advisable)
* 1TB hard disk space in Server Machine

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

# System Features

## System Feature 1

### Description and Priority

The system needs high priority when data is to be updated. The guide should not be allocated to two same group at same day and same time.

### Stimulus/Response Sequences

The confirmation of the booking needs a quick response. Updating data at the same time needs a quick response.

## Functional Requirements

**REQ-1: User Account Management**

The system shall allow hospital administrators to create, manage, and deactivate user accounts for hospital staff, including doctors, nurses, and administrative personnel.

**REQ-2: Patient Information Management**

The system shall enable authorized healthcare providers to view and update patient information, including medical records, diagnoses, treatment plans, and prescription details.

**REQ-8: Prescription and Medication Management**

The system shall support healthcare providers in prescribing medications, maintaining a medication database, and tracking patient medication history.

**REQ-12: Staff Scheduling**

The system shall assist in scheduling hospital staff, including doctors, nurses, and support personnel, considering shift assignments, time-off requests, and workload distribution.

**REQ-13: Emergency Response and Alerts**

The system shall support emergency response by sending alerts and notifications to appropriate personnel in the event of critical situations or patient emergencies.

**REQ-14: Security and Access Control**

The system shall implement robust security measures, including user authentication, role-based access control, and encryption, to protect patient data and system integrity.

**REQ-15: Telemedicine Integration**

The system shall integrate with telemedicine platforms to enable remote consultations and telehealth services for patients.

**REQ-16: Mobile Access**

The system shall provide mobile access for healthcare providers to access patient information, make updates, and view schedules from smartphones and tablets.

# Other Nonfunctional Requirements

## Performance Requirements

In this system the response time for loading and processing the task is very fast and can be triggered by a single click. If there is only one user who want to perform a task, then the performance time will be excellent.

## Safety Requirements

If there is an extensive impairment to a wide portion of the database due to any circumstances, such as a disk crash, the recovery method restores a past copy of the database that was backed up to archival storage and reconstructs a more current state.

## Security Requirements

Security is one of the important features of any online system. So, to ensure security, the user of the system should be registered to access any confidential information. The admin panel also asks for admin to first.

## Software Quality Attributes

* **Maintainability and Expandability:**

The system should be designed to be easily maintainable. So, if there is any need to add new functionality or correct errors then it does not take lot of time and effort to implement or handle errors. And the new functionality can be easily accessed from other parts of the system.

* **Reliability and Efficiency:**

The system responds to the request in a reasonable period at least before the session expires. Also, it should be able to give the valid result if no data is found. So, the system should not have crashed on generating the wrong query.

## Business Rules

* Want to take responsibility for failures due to hardware malfunctioning.
* The warranty period for maintaining the software would be one year.
* Additional payments will be analyzed and charged for further maintenance.

**Patient registration:** A new patient must provide their personal and contact information, including name, address, phone number, and insurance information, to be registered in the system.

* **Unique patient ID:** Each patient must be assigned a unique ID that is generated by the system and can be used to identify and retrieve the patient's information.
* **Access control:** Only authorized personnel, such as administrators and receptionists, can access the system and add or modify patient data.
* **Data privacy:** Patient information must be protected and kept confidential, with strict access controls in place to prevent unauthorized access or misuse of data.
* **Average length of stay:** The system must be able to calculate and track the average length of stay for patients, from the time they are admitted to the time they are discharged.

Appendix A: Glossary

* **FTP**
  + File Transfer Protocol
  + Protocol to send/receive files to/from an FTP server.
* **SQL**
  + Structured Query Language
  + A programming language used for making queries to a database, and setting/retrieving data to/from it.
* **TLS**
  + Transport Layer Security
  + A high-encryption security protocol for internet connection
* **TCP/IP**
  + Transfer Control Protocol/Internet Protocol

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* **TCP**
  + A protocol for transferring data to/from the internet.
* **IP**
  + A protocol for allowing computers/devices with this to connect to the internet.
* **Database**
  + Big memory address block which contains large set of data
  + With subsets and fields that can search for by filter, read, and written.