Requirements Specification

for Project 1, ITIS 6120

[Introduction](#_heading=h.c49to4fro7xa)

[Functional Requirements](#_heading=h.db35i1ib0ifa)

[SPEC A:](#_heading=h.9pwi9mrb3nbk)

[SPEC B:](#_heading=h.xmcgi82h5v3z)

[SPEC C:](#_heading=h.8kbq6611o7tm)

[SPEC D:](#_heading=h.cbk7rkryz6b4)

[SPEC E:](#_heading=h.nwyd3x4b8yv0)

[SPEC F:](#_heading=h.gx6o16godfyj)

[SPEC G:](#_heading=h.46zaprwcoma9)

[SPEC H:](#_heading=h.d2e1xloumnw6)

[Conclusion](#_heading=h.pfy3rwrlblsn)

Ophthalmology Practice Database Requirements Specification Document

# Introduction

This document outlines the functional requirements for the database of an ophthalmology practice. The system is designed to manage and store data regarding patients, healthcare providers, visits, clinical care, and operational management including appointments, room allocation, supplies, and billing. It aims to enhance the efficiency of patient care delivery, support administrative functions, and improve data management practices within the practice.

# Functional Requirements

## SPEC A:

**Users should be able to enter patient demographic information (including address and insurance).**

- The system must allow the entry of comprehensive demographic details of patients, including but not limited to full name, date of birth, gender, address, contact information, and insurance provider details.

- Each patient record must be uniquely identifiable within the database, ensuring accurate retrieval and management of patient information.

## SPEC B:

**Users should be able to enter provider information (including specialty).**

- The system must support the input of detailed information about healthcare providers, including their full name, contact details, specialty (e.g., Ophthalmologist, Optometrist), and any other relevant information.

- Provider records must facilitate easy access to provider-specific data, aiding in scheduling, referrals, and operational management.

## SPEC C:

**Users should be able to enter visit information (including time and facility).**

- The system should allow for the documentation of each patient visit, including the date, time, and facility where the visit occurred. This should also cover the purpose of the visit and the provider seen.

- The system must track and manage appointments and visits efficiently, ensuring optimal scheduling and resource allocation.

## SPEC D:

**Users should be able to enter clinical care information (including recording of signs and symptoms, discharge diagnosis and prescriptions, and orders and results of exams, tests, and procedures).**

- The system must provide functionality for entering detailed clinical information for each patient visit, including symptoms presented, diagnoses made, treatment plans prescribed, and the results of any tests or procedures ordered.

- This specification supports the delivery of patient care and the tracking of patient health outcomes over time.

## SPEC E:

**Users should be able to enter other pertinent information depending on scenarios, for example, clinics will need to manage appointments and exam rooms, emergency departments will need to manage information about beds. All clinics will also need to manage supplies and billing.**

- The database should be versatile to accommodate the entry and management of operational data, including but not limited to appointments, room allocations, inventory levels, and billing information.

- This will aid in the holistic management of the practice's operations, ensuring that patient care is delivered efficiently and effectively.

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## SPEC F:

**The database should support editing of existing records to correct data entry mistakes or legitimate changes of information (e.g., change of address or insurance).**

- Users must have the capability to update or correct patient and provider information as needed to maintain the accuracy and integrity of the database.

- The system should track changes for audit purposes, including who made the change and when.

## SPEC G:

**Your database should support searching of patient records based on name, ID, and possibly other information such as visit dates.**

- The system must offer robust search functionality, allowing users to quickly find patient records using multiple identifiers, such as patient name, ID, and visit dates.

- This specification is critical for improving access to patient information and supporting the delivery of care.

## SPEC H:

**Your database should support reporting functions such as listing all patients who satisfy certain selection criteria, such as those who have been given a certain diagnosis, or who visited on certain days, or who have been seen by a certain doctor, or combinations of these such as, the diagnoses of patients who visited the clinic twice within the shortest time interval.**

- The system should provide comprehensive reporting capabilities, enabling the generation of reports based on various criteria to support clinical, operational, and administrative decision-making.

- Reports should be customizable to meet the specific needs of the practice, supporting a range of operational and clinical management activities.

# Conclusion

This document has outlined the essential functional requirements for the ophthalmology practice database. By meeting these specifications, the system will enhance the efficiency and effectiveness of patient care delivery, improve operational management, and support the practice’s administrative functions.