1. **DB Design & DB operations**

Introduce your plan for DB design, and what kinds of DB operations you will implement to fullfill the requirements in your application

The database should include the following base tables:

1. Patients
2. Doctors
3. Specialization
4. Department
5. Nurse
6. Appointments
7. Hospital staff
8. Shift hours
9. Rooms
10. Procedure
11. Payments
12. Lab Test
13. Insurance
14. License
15. Qualification

* The Patients table would store information on each patient, including their name, age, contact information, and medical history.
* The Doctors table would store information on each doctor, including their name, specialty, and contact information.
* The Specialization table would contain information on each type of medical specialization, such as cardiology, oncology, etc.
* The Department would store information about the department name, and head of the department.
* The Nurse table would store information on each nurse, including their name, specialty, and contact information.
* The Appointments table would store information on each appointment, including the patient's name, the doctor's name, the date and time of the appointment, and the room number.
* The Hospital staff table would store information on each staff, including their name, specialty, shift time and contact information.
* Shift hours table would store information about the start time and end time of the pre-defined shifts of the employees.
* The Rooms table would store information on each room, including the room number and the type of room.
* The Procedure table would store information on each procedure, including the patient's name, the doctor's name, the procedure name, the date and time of the procedure, and the room number.
* The Payments table would store information on each payment, including the patient's name, the amount paid, and the date of the payment.

• The Lab Test table would store information on each lab test, including the patient's name, the test name, the date and time of the test, and the room number.

• The Insurance table would store information about the patient's insurance, including the patient's name, the insurance company, the policy number, and the date of coverage.

• The License table would store information about the staff`s license, including the staff`s name, the license number and the state of issue.

• The Qualification table would store information about the staff`s qualifications, including the staff`s name, the qualification name, the institution, and the year of graduation.

Note: Based on the relationship of the main entities we will create associative entities to better represent them.

Note 2: As the implementation progresses, we will add new tables to support additional functionality.