**Tasks to do:**

* Build an **ER** Diagram
* Create the **relational model** for this ER Diagram

**Tools:**

Use any tool such as Microsoft Visio, or any online model tool such as:

<https://app.diagrams.net/>

**E-Hospital Project Scope**

The E-Hospital system is a huge, complex and integrated system; it contains many modules such as:

* **Registration**: All users (patient, physician, pharmacist, Lab technician, X-ray technician, manager) of the E-Hospital should register on the system.
* **Scheduling**: The patient can schedule an appointment with a general doctor or specialist if he get a referral for specialist
* **Patient Record**: this module provides activities that the patient did in this clinic: all diagnostics, request for lab, x-ray, prescription
* **Laboratory**: the lab technical uses this module to manage the labs done by a patient.
* **Pharmacy**: the pharmacist uses this module to manage the patient prescriptions
* **X-Ray**: X-ray technician uses this module to manage the patient X-rays.
* **Billing & Payment**: this module will manage the billing and the patient payments

**The system Requirements**

**Functional Requirements:**

1. The system should allow the users (patient, physician, pharmacist, Lab technician, X-ray technician, manager) of the application to register to the application.
2. The system should keep all patient information: name, date of birth, mobile, email, address, weight, height, blood group, patient illness and allergies
3. The physician should register in the system with his employee ID, name, specialty {general practitioner, or any other specialty}, medical practice number, phone, email
4. The manager, Lab technician, and X-ray technician should register in the system with his employee ID, name, phone, email
5. The system should allow to the manager to create the weakly physician schedule:
   * Each weakly physician schedule is composed by a set of daily physician schedules
   * Each the daily physician schedule is composed by the daily physician morning schedule, and the daily physician afternoon schedule
   * The daily physician morning schedule and the daily physician afternoon schedule should have a room number and the maximum of patient to register.
6. The system should shows the physician schedule to allow him to schedule appointment
7. The system not should not allow the patient to schedule an appointment with a physician if the physician schedule reach the maximum capacity
8. The system should allow the physician to description the symptoms and diagnosis of the patient in each patient visit
9. The system should allow the physician requests a lab test or X-ray and medication.
10. Upon a physician create a medication prescription, the lab or X-ray request, respectively pharmacist, the Lab technician, X-ray technician will get it in their request list
11. When the patient get the medication, the pharmacist should update the patient prescription, as complete. But, if there is any medication missing the status should be incomplete, and the none delivered medication should written and given to the patient to buy it outside.
12. Each request (X-ray, lab, prescription) contains a set of request items
13. Each request item contains the product-ID ( medication ID, Lab ID, or X-Ray ID) and description
14. Each medication is identified by its medication ID, name, expired date, and price.
15. Each request product (lab or X-ray) is identified by its ID, name, and price.
16. The price of patient visit depends on medicine specialty, means each medicine specialty has its own price
17. The general practitioner can reference a patient to a specialist
18. A patient referral should contain a referral code, description, the referral date, and the priority.
19. The patient can schedule an appointment with a specialist by using the referral code.
20. Each patient visit and request (medical prescription, lab, X-ray) has its own invoice.
21. The patient should pay for each invoice individually.

Example :

**Diagram

Description automatically generated**