22BCI0266
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MODEL LAB EXAM
SOFTWARE ENGINEERING LAB
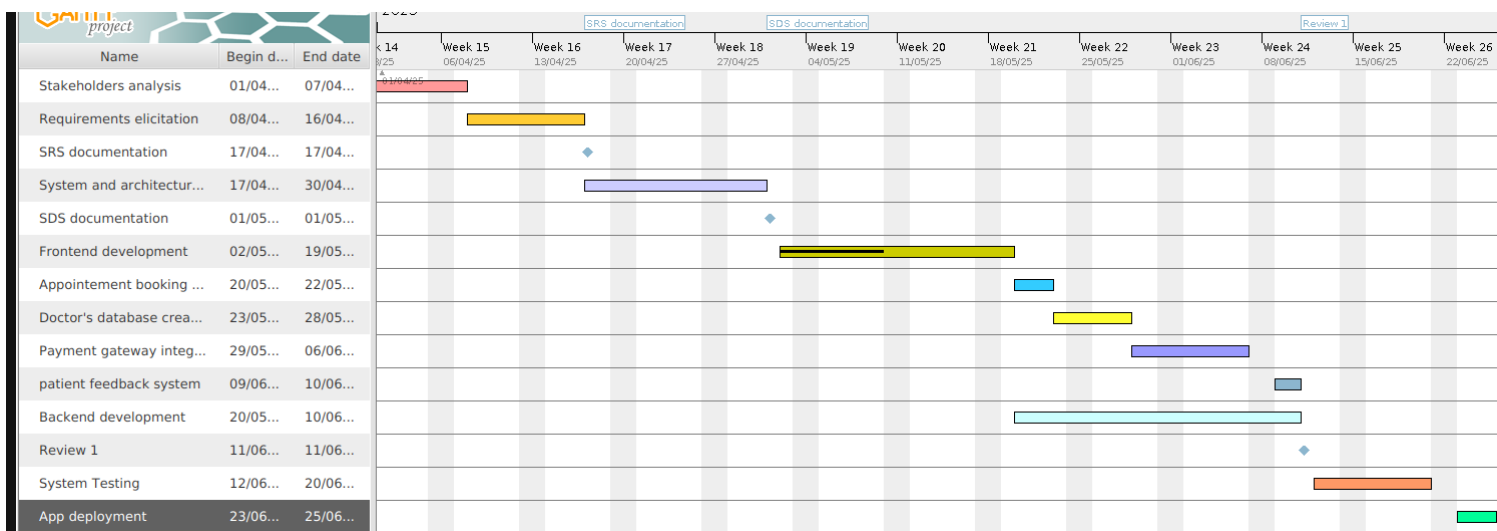
2)Hospital Management System

a) Develop a Gantt chart or Activity Network to plan the phases of building an Hospital Management System that includes patient registration, appointment booking, doctor management, billing, and reports.

b) Create an Entity Relationship (ER) diagram showing the relationships between patients, doctors, appointments, and treatments, etc.
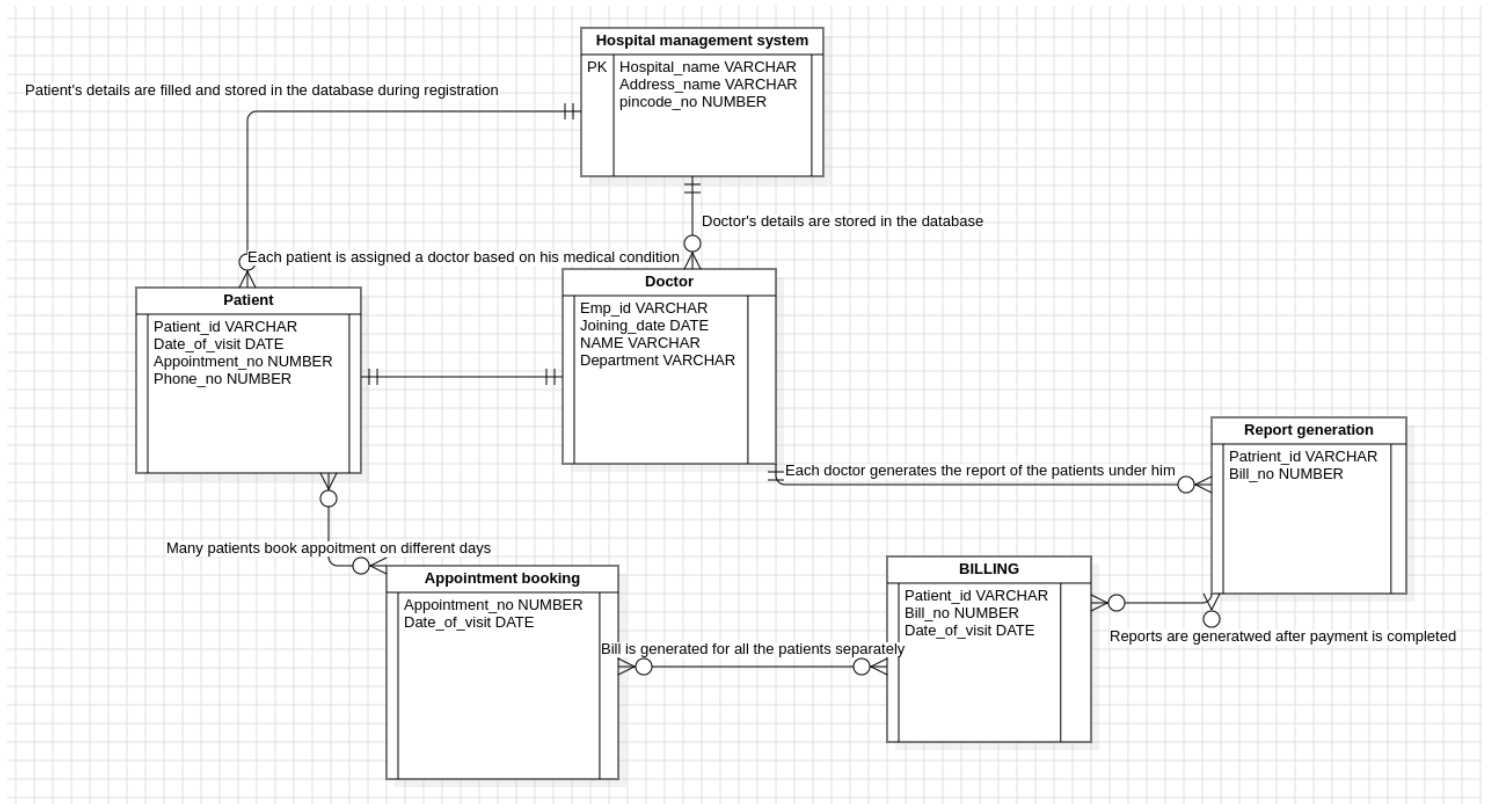
c) Draw UML Class for the hospital system covering all key functionalities

SOLUTION:

GANTT CHART:

E-R DIAGRAM:

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Hospital management system

PK	Hospital_name VARCHAR
	Address_name VARCHAR
	pincode_no NUMBER

Patient's details are filled and stored in the database during registration

Doctor's details are stored in the database

Each patient is assigned a doctor based on his medical condition

Patient

Patient_id VARCHAR
Date_of_visit DATE
Appointment_no NUMBER
Phone_no NUMBER

Doctor

Emp_id VARCHAR
Joining_date DATE
NAME VARCHAR
Department VARCHAR

Report generation

Patrient_id VARCHAR
Bill_no NUMBER

Each doctor generates the report of the patients under him

Many patients book appoitment on different days

Appointment booking

Appointment_no NUMBER
Date_of_visit DATE

BILLING

Patient_id VARCHAR
Bill_no NUMBER
Date_of_visit DATE

Reports are generatwed after payment is completed

Bill is generated for all the patients separately

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CLASS DIAGRAM:

Patient

+PatientID
+Date_of_visit
+Phone_no
+Disease_details

+getDetails()
+Date_details()
+getTreatmentdetails()

Appointment_booking

+Date_of_visit
+PatientID
+Appointment_date
+Treatment_details

+book()
+appointment_details()
+treatment_details()

Doctor

+PatientID
+DoctorID
+Treatment_details
+medicines

+Medice_details()
+patient_details()
+reports_generated()

Report generation

+Patientid
+doctorid

+getREport()
+generate_report()

+Doctor generates the report

Billing

+PatientID
+Appointment_date
+Payment_id

+getDetails()
+GenerateBill()
+Compute_total_amt()

+Report is generated only after billing