



EDGE BU CSE Digital Skills Training

***Project Report on
PATHOLOGICAL DATABASE MANAGEMENT SYSTEM (PDMS)***

Course Name: Database

Batch No.-01

Submitted to:

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❖ Step 1: Entity

1. Patients
2. Specimens
3. Tests
4. Results
5. Reports
6. Diagnosis
7. Treatments
8. Medications
9. Allergies
10. Immunizations
11. Appointments
12. Invoices
13. Payments

❖ Step 2: Attributes & Primary key

1. Patients (Patient_id(pk), Name, DOB, Gender, Contact)
2. Specimens (Specimen_id (pk), Specimen_type, Collection_date, Received-date, Status)
3. Tests (Test_id (pk), Test_name, Description, Cost, Test_category)
4. Results (Result_id (pk), Result_data, Result_date)
5. Reports (Report_id (pk), Report_date, Report_data)
6. Diagnoses (Diagnosis_id (pk), Diagnosis_code, Diagnosis_description)
7. Treatments (Treatment_id (pk), Treatment_code, Treatment_description)
8. Medications (Medication_id (pk), Medication_name, Dosage, Frequency)
9. Allergies (Allergy_id (pk), Allergen_name, Reaction)
10. Immunizations (Immunization_id (pk), Vaccine_name, Date_given)
11. Appointments (Appointment_id (pk), Appointment_date, Appointment_type)
12. Invoices (Invoice_id (pk), Invoice_date, Amount_due, Status)
13. Payments (Payment_id (pk), Payment_date, Amount_paid, Payment_method)

❖ Step 03: ERD Relationships

1. Patients -- Specimens
2. Patients -- Reports
3. Patients -- Diagnoses
4. Patients -- Treatments
5. Patients -- Medications

6. Patients -- Allergies
7. Patients -- Immunizations
8. Patients -- Appointments
9. Invoices – Payments
10. Specimens– Produced by – Results
11. Reports – Generated by -Tests
12. Reports – Billed in - Invoices

❖ Step 04: Cardinality Ratio and participation

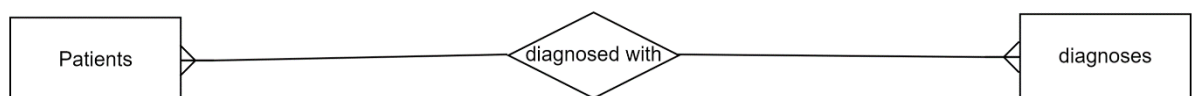
1. Patients – provides – Specimens



2. Patients – generated for- reports



3. Patients – diagnosed with – Diagnoses



4. Patients – Undergoes – Treatments



5. Patients - Prescribed – Medications



6. Patients – suffers from – Allergies



7. Patients -Immunized with – Immunizations



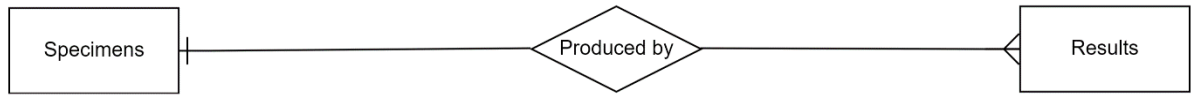
8. Patients – Schedules – Appointments



9. Invoices – paid by – Payments



10. Specimens– Produced by – Results



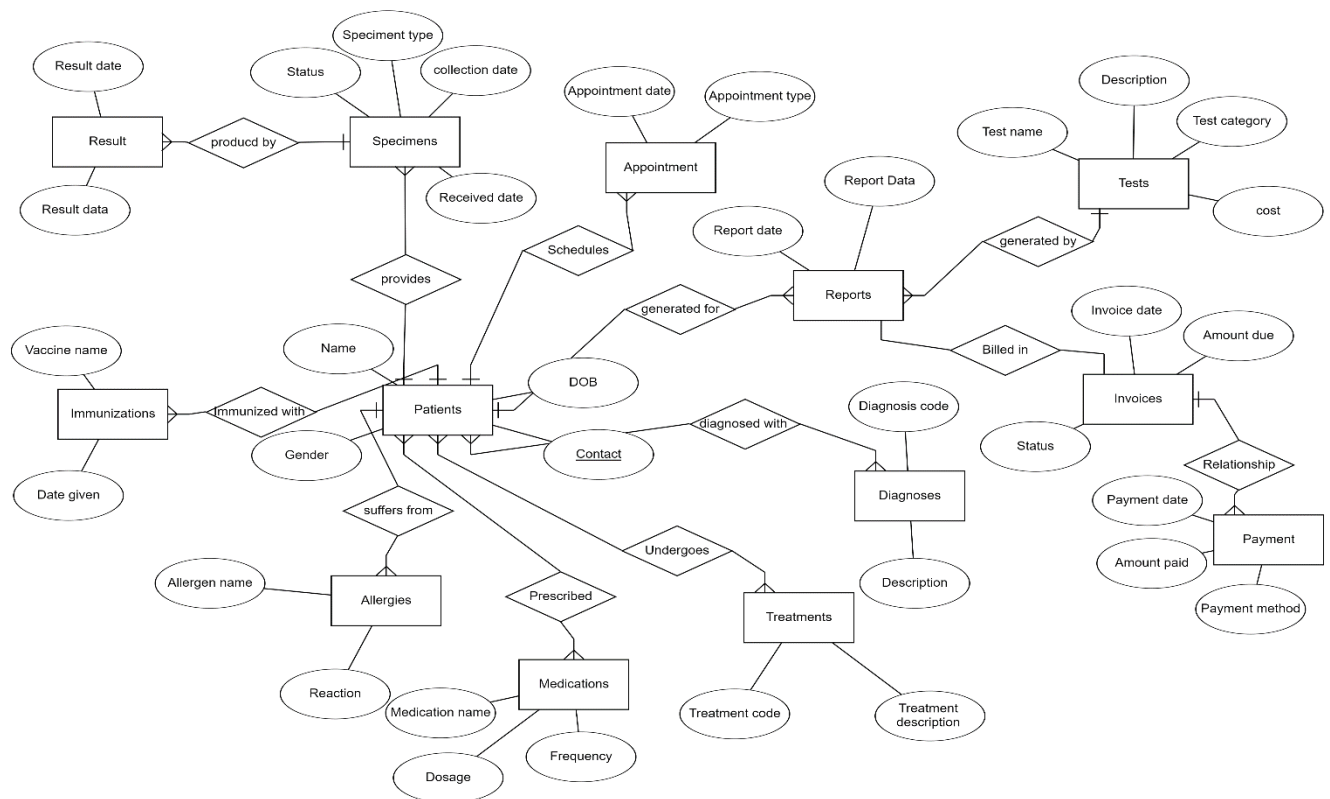
11. Reports – Generated by -Tests



12. Reports – Billed in - Invoices



❖ Step 05: ERD diagram



Reduction of schema

1. Patients (Patient_id (pk), Name, DOB, Gender, Contact)
2. Specimens (Specimen_id (pk), Patient_id(fk), Specimen_type, Collection_date, Received-date, Status)
3. Tests (Test_id (pk), Test_name, Description, Cost, Test_category)
4. Results (Result_id (pk), Specimen_id (fk), Test_id (fk) Result_data, Result_date)
5. Reports (Report_id (pk), Patient_id (fk), Test_id (fk), Report_date, Report_data)
6. Diagnosis (Diagnosis_id (pk), Patient_id (fk), Diagnosis_code, Diagnosis_description)
7. Patients_diagnoses (patient_id(pk),patient_id(fk),diagnosis_id (fk))
8. Treatments (Treatment_id (pk), Patient_id (fk),Treatment_code, Treatment_description)
9. Patients_treatments(patient_id(pk),patients_id(fk),treatment_id(fk))
- 10.Medications (Medication_id (pk), Patient_id (fk), Medication_name, Dosage, Frequency)
- 11.Patients_medications(patient_id(pk),patients_id(fk))
- 12.Allergies (Allergy_id (pk), Patient_id (fk), Allergen_name, Reaction)
- 13.Immunizations (Immunization_id (pk), Patient_id(fk), Vaccine_name, Date_given)
- 14.Appointments (Appointment_id (pk), Patient_id (fk), Appointment_date, Appointment_type)
- 15.Invoices (Invoice_id (pk), Patient_id (fk),reports_id(fk), Invoice_date, Amount_due, Status)
- 16.Payments (Payment_id (pk), Invoice_id (fk),Payment_date, Amount_paid, Payment_method)

