

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. 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

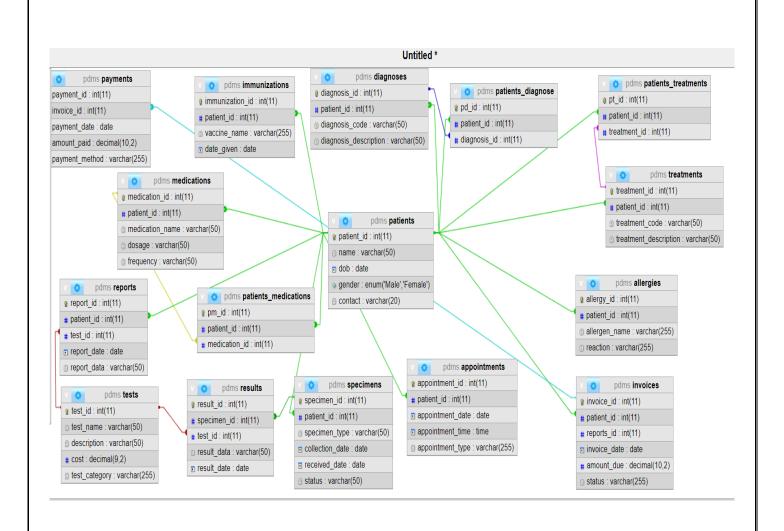
- 1. Patients -- Specimens
- 2. Patients -- Reports
- 3. Patients -- Diagnoses
- 4. Patients -- Treatments
- 5. Patients -- Medications

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 provides Specimens Patients 2. Pateints – generated for- reports generated for Patients Reports 3. Patients – diagnosed with – Diagnoses diagnosed with diagnoses Patients 4. Patients – Undergoes – Treatments undergoes Treatments Patients 5. Patients - Prescribed - Medications Medications Patients 6. Patients – suffers from – Allergies suffers from Allergies Patients 7. Patients -Immunized with – Immunizations immunized with **Immunizations** Patients 8. Patients – Schedules – Appointments schedules Appointments Patients

9. Invoices – paid by – Payments paid by Payment Invoices 10. Specimens – Produced by – Results Produced by Specimens Results 11.Reports – Generated by -Tests generated by Reports Tests 12.Reports - Billed in - Invoices Billed in Reports Invoices ❖ Step 05: ERD diagram Result date collection date Status Description (Appointment date) (Appointment type) Test category Test name Appointment Report Data Tests Received date Report date generated by Schedules provides Reports generated for Invoice date Amount due Billed in Invoices (Diagnosis code mmunized with diagnosed with Contact Relationship Date given Diagnoses Payment date suffers from Undergoes Amount paid Description Prescribed (Payment method) Treatments Reaction Treatment code Frequency

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. Pateints diagnoses (pd id(pk),patient id(fk),diagnosis id (fk))
- 8. Treatments (Treatment_id (pk), Patient_id (fk), Treatment_code, Treatment description)
- 9. Patients_treatments(pt_id(pk),patients_id(fk),treatment_id(fk))
- 10.Medications (Medication_id (pk), Patient_id (fk), Medication_name, Dosage, Frequency)
- 11.Pateints_medications(pm_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)



Thank You