TOPIC:-

<u>A.I – Based Smart Hospital</u>

<u>SUBMITTED BY:-</u>

<u>Amit Mishra</u>   (2410030616)
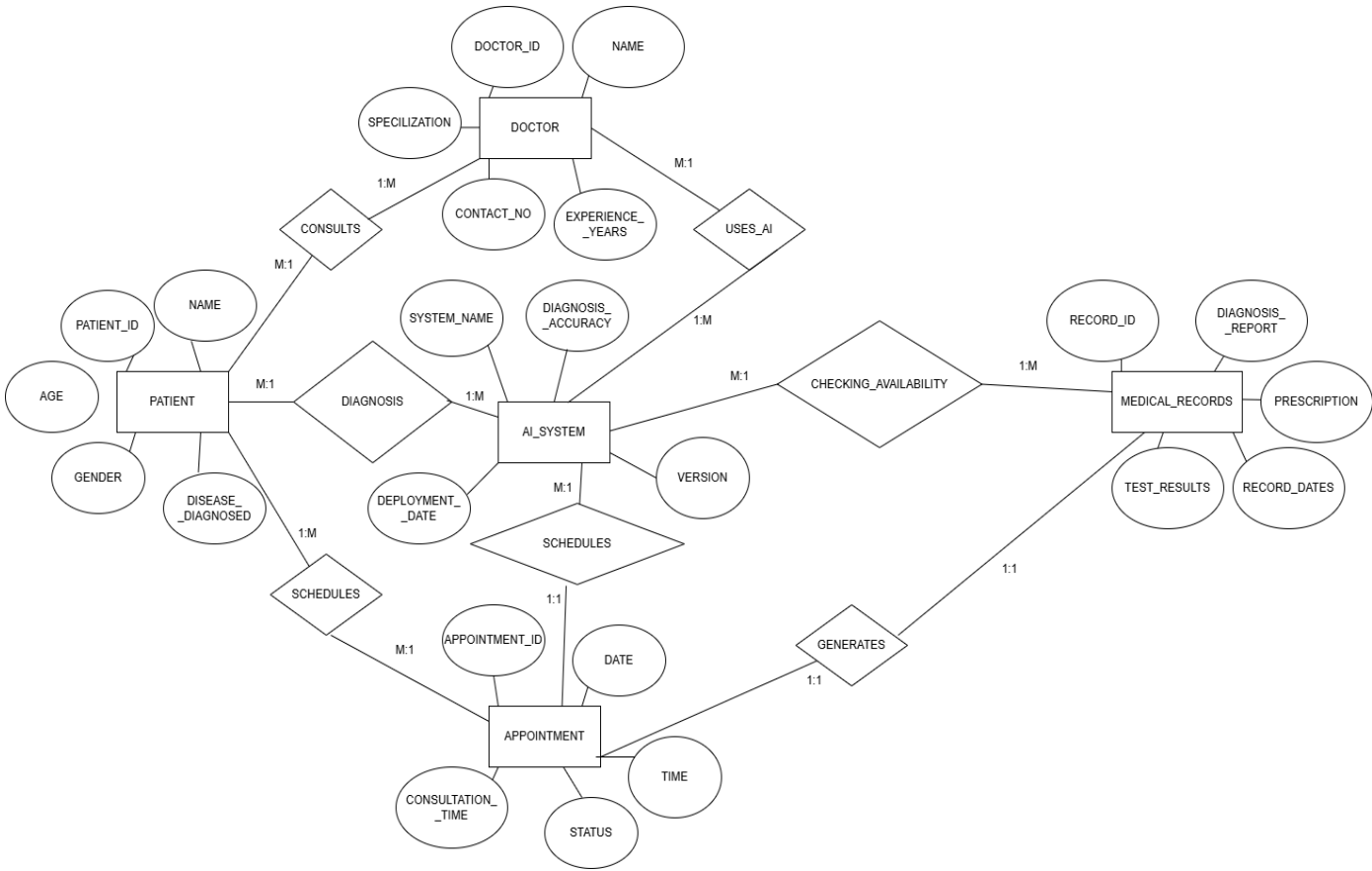<u>Anjali</u>   (2410030568)
<u>Akshat Raj</u>   (2410030717)
<u>Aditya Saluja</u> (2410030634)

<u>SUBMITTED TO:-</u>

<u>Mr: Atul Kumar</u>

ER diagram of A.I -Based Smart Hospital

SQL Queries with tables :-

```
MariaDB [(none)]> use amit;
Database changed
MariaDB [amit]> CREATE TABLE PATIENT (
    ->     PATIENT_ID INT PRIMARY KEY,
    ->     NAME VARCHAR(100),
    ->     AGE INT,
    ->     GENDER VARCHAR(10),
    ->     DISEASE_DIAGNOSED VARCHAR(200)
    -> );
Query OK, 0 rows affected (0.024 sec)

MariaDB [amit]> CREATE TABLE DOCTOR (
    ->     DOCTOR_ID INT PRIMARY KEY,
    ->     NAME VARCHAR(100),
    ->     SPECIALIZATION VARCHAR(100),
    ->     CONTACT_NO VARCHAR(15),
    ->     EXPERIENCE_YEARS INT
    -> );
Query OK, 0 rows affected (0.027 sec)

MariaDB [amit]> CREATE TABLE AI_SYSTEM (
    ->     AI_ID INT PRIMARY KEY,
    ->     SYSTEM_NAME VARCHAR(100),
    ->     DIAGNOSIS_ACCURACY DECIMAL(5,2),
    ->     VERSION VARCHAR(50),
    ->     DEPLOYMENT_DATE DATE
    -> );
Query OK, 0 rows affected (0.024 sec)

MariaDB [amit]> CREATE TABLE APPOINTMENT (
    ->     APPOINTMENT_ID INT PRIMARY KEY,
    ->     PATIENT_ID INT,
    ->     DATE DATE,
    ->     TIME TIME,
    ->     CONSULTATION_TIME VARCHAR(50),
    ->     STATUS VARCHAR(50),
    ->
    ->     FOREIGN KEY (PATIENT_ID) REFERENCES PATIENT(PATIENT_ID)
    -> );
Query OK, 0 rows affected (0.044 sec)

MariaDB [amit]> CREATE TABLE MEDICAL_RECORDS (
    ->     RECORD_ID INT PRIMARY KEY,
    ->     APPOINTMENT_ID INT,
    ->     DIAGNOSIS_REPORT VARCHAR(255),
    ->     PRESCRIPTION VARCHAR(255),
    ->     TEST_RESULTS VARCHAR(255),
    ->     RECORD_DATES DATE,
    ->
    ->     FOREIGN KEY (APPOINTMENT_ID) REFERENCES APPOINTMENT(APPOINTMENT_ID)
    -> );
Query OK, 0 rows affected (0.043 sec)
```

```
MariaDB [amit]> ALTER TABLE PATIENT
    -> ADD DOCTOR_ID INT,
    -> ADD FOREIGN KEY (DOCTOR_ID) REFERENCES DOCTOR(DOCTOR_ID);
Query OK, 0 rows affected (0.083 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [amit]> ALTER TABLE DOCTOR
    -> ADD AI_ID INT,
    -> ADD FOREIGN KEY (AI_ID) REFERENCES AI_SYSTEM(AI_ID);
Query OK, 0 rows affected (0.083 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [amit]> CREATE TABLE DIAGNOSIS (
    ->     PATIENT_ID INT,
    ->     AI_ID INT,
    ->     PRIMARY KEY (PATIENT_ID, AI_ID),
    ->     FOREIGN KEY (PATIENT_ID) REFERENCES PATIENT(PATIENT_ID),
    ->     FOREIGN KEY (AI_ID) REFERENCES AI_SYSTEM(AI_ID)
    -> );
Query OK, 0 rows affected (0.054 sec)

MariaDB [amit]> ALTER TABLE MEDICAL_RECORDS
    -> ADD AI_ID INT,
    -> ADD FOREIGN KEY (AI_ID) REFERENCES AI_SYSTEM(AI_ID);
Query OK, 0 rows affected (0.072 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [amit]> INSERT INTO PATIENT
    -> (PATIENT_ID, NAME, AGE, GENDER, DISEASE_DIAGNOSED)
    -> VALUES
    -> (1, 'Amit', 20, 'Male', 'Fever'),
    -> (2, 'Akshat', 20, 'Male', 'Cold'),
    -> (3, 'Anjali', 20, 'Female', 'Flu'),
    -> (4, 'Aditya', 20, 'Male', 'Headache');
Query OK, 4 rows affected (0.017 sec)
Records: 4  Duplicates: 0  Warnings: 0

MariaDB [amit]> INSERT INTO DOCTOR
    -> (DOCTOR_ID, NAME, SPECIALIZATION, CONTACT_NO, EXPERIENCE_YEARS)
    -> VALUES
    -> (101, 'Dr. Sharma', 'Cardiologist', '9876543210', 12),
    -> (102, 'Dr. Mehta', 'Neurologist', '9876543211', 10),
    -> (103, 'Dr. Verma', 'General Physician', '9876543212', 8);
Query OK, 3 rows affected (0.018 sec)
Records: 3  Duplicates: 0  Warnings: 0

MariaDB [amit]> INSERT INTO AI_SYSTEM
    -> (AI_ID, SYSTEM_NAME, DIAGNOSIS_ACCURACY, VERSION, DEPLOYMENT_DATE)
    -> VALUES
    -> (201, 'MediAI Pro', 96.50, 'v2.1', '2025-01-10'),
    -> (202, 'HealthBot X', 94.20, 'v1.8', '2024-11-15');
Query OK, 2 rows affected (0.009 sec)
Records: 2  Duplicates: 0  Warnings: 0
```

```
MariaDB [amit]> UPDATE DOCTOR SET AI_ID = 201 WHERE DOCTOR_ID = 101;
Query OK, 1 row affected (0.005 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [amit]> UPDATE DOCTOR SET AI_ID = 202 WHERE DOCTOR_ID = 102;
Query OK, 1 row affected (0.003 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [amit]> UPDATE DOCTOR SET AI_ID = 201 WHERE DOCTOR_ID = 103;
Query OK, 1 row affected (0.002 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [amit]> UPDATE PATIENT SET DOCTOR_ID = 101 WHERE PATIENT_ID = 1;
Query OK, 1 row affected (0.015 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [amit]> UPDATE PATIENT SET DOCTOR_ID = 102 WHERE PATIENT_ID = 2;
Query OK, 1 row affected (0.002 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [amit]> UPDATE PATIENT SET DOCTOR_ID = 103 WHERE PATIENT_ID = 3;
Query OK, 1 row affected (0.005 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [amit]> UPDATE PATIENT SET DOCTOR_ID = 101 WHERE PATIENT_ID = 4;
Query OK, 1 row affected (0.003 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [amit]> INSERT INTO APPOINTMENT
    -> (APPOINTMENT_ID, PATIENT_ID, DATE, TIME, CONSULTATION_TIME, STATUS)
    -> VALUES
    -> (301, 1, '2026-02-25', '10:00:00', '15 Minutes', 'Completed'),
    -> (302, 2, '2026-02-25', '11:00:00', '20 Minutes', 'Completed'),
    -> (303, 3, '2026-02-26', '09:30:00', '10 Minutes', 'Pending'),
    -> (304, 4, '2026-02-26', '12:00:00', '15 Minutes', 'Completed');
Query OK, 4 rows affected (0.016 sec)
Records: 4  Duplicates: 0  Warnings: 0

MariaDB [amit]> INSERT INTO MEDICAL_RECORDS
    -> (RECORD_ID, APPOINTMENT_ID, DIAGNOSIS_REPORT, PRESCRIPTION, TEST_RESULTS, RECORD_DATES)
    -> VALUES
    -> (401, 301, 'Mild Fever', 'Paracetamol', 'Blood Test Normal', '2026-02-25'),
    -> (402, 302, 'Common Cold', 'Antihistamine', 'No Infection', '2026-02-25'),
    -> (403, 303, 'Seasonal Flu', 'Rest + Fluids', 'Influenza Positive', '2026-02-26'),
    -> (404, 304, 'Migraine', 'Painkillers', 'CT Scan Normal', '2026-02-26');
Query OK, 4 rows affected (0.017 sec)
Records: 4  Duplicates: 0  Warnings: 0
```

```
MariaDB [amit]> INSERT INTO DIAGNOSIS
    -> (PATIENT_ID, AI_ID)
    -> VALUES
    -> (1, 201),
    -> (2, 202),
    -> (3, 201),
    -> (4, 201);
Query OK, 4 rows affected (0.016 sec)
Records: 4  Duplicates: 0  Warnings: 0

MariaDB [amit]> SELECT
    ->      P.NAME AS PATIENT,
    ->      D.NAME AS DOCTOR,
    ->      AI.SYSTEM_NAME,
    ->      A.DATE,
    ->      M.DIAGNOSIS_REPORT
    -> FROM PATIENT P
    -> JOIN DOCTOR D ON P.DOCTOR_ID = D.DOCTOR_ID
    -> JOIN DIAGNOSIS DI ON P.PATIENT_ID = DI.PATIENT_ID
    -> JOIN AI_SYSTEM AI ON DI.AI_ID = AI.AI_ID
    -> JOIN APPOINTMENT A ON P.PATIENT_ID = A.PATIENT_ID
    -> JOIN MEDICAL_RECORDS M ON A.APPOINTMENT_ID = M.APPOINTMENT_ID;
+---------+------------+-------------+------------+------------------+
| PATIENT | DOCTOR     | SYSTEM_NAME | DATE       | DIAGNOSIS_REPORT |
+---------+------------+-------------+------------+------------------+
| Amit    | Dr. Sharma | MediAI Pro  | 2026-02-25 | Mild Fever       |
| Akshat  | Dr. Mehta  | HealthBot X | 2026-02-25 | Common Cold      |
| Anjali  | Dr. Verma  | MediAI Pro  | 2026-02-26 | Seasonal Flu     |
| Aditya  | Dr. Sharma | MediAI Pro  | 2026-02-26 | Migraine         |
+---------+------------+-------------+------------+------------------+
4 rows in set (0.002 sec)
```