HOSTEL MANAGEMENT SYSTEM

DATABASE MANAGEMENT SYSTEM PROJECT REPORT

By

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PROBLEM STATEMENT:

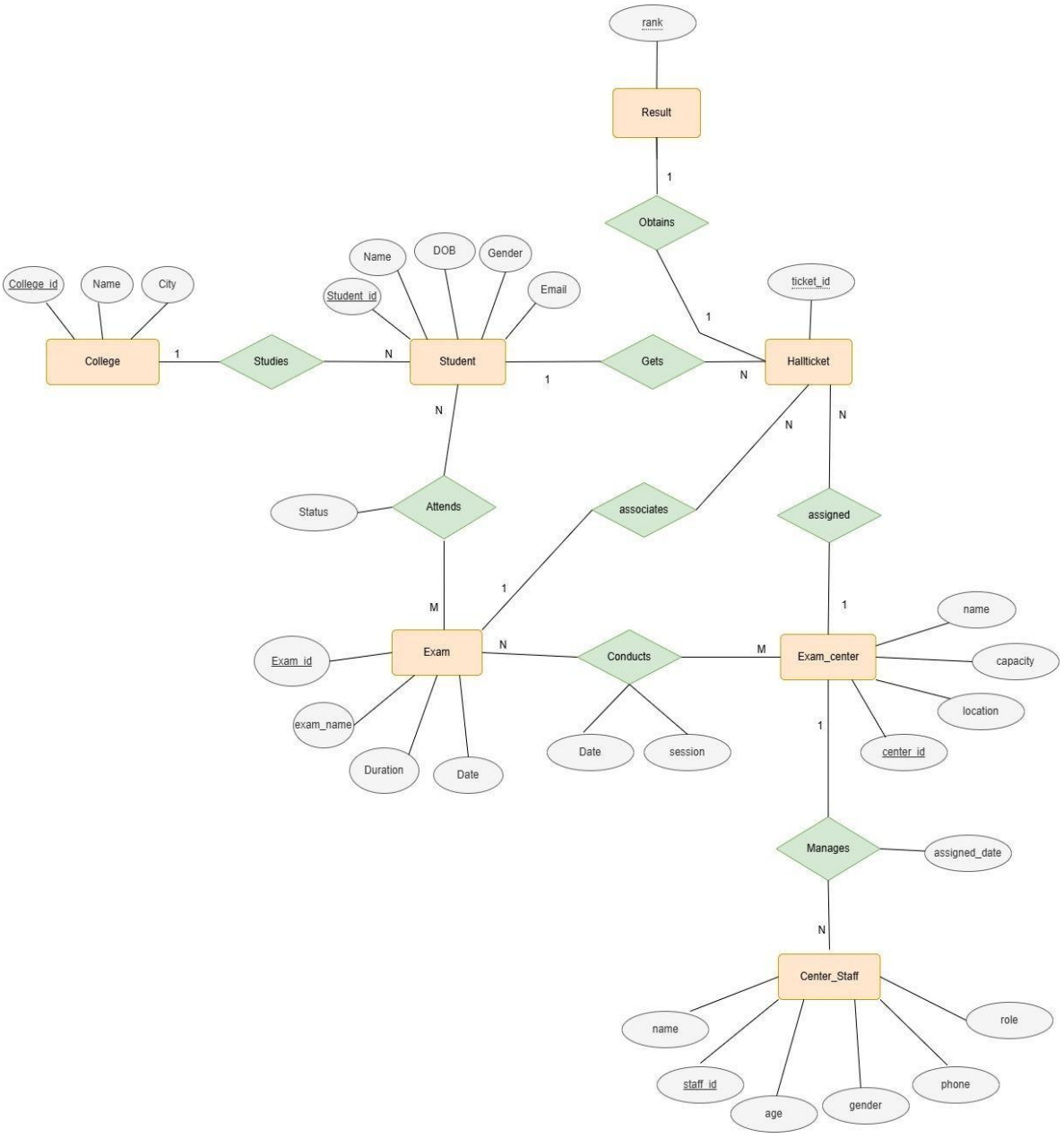
In this project, we have designed a **database management system** to store and manage the information related to students, examinations, exam centers, hall ticket generation, and result declaration under the National Testing Agency (NTA). The database contains important information such as student details, the exams they register for, the centers where these exams are conducted, the

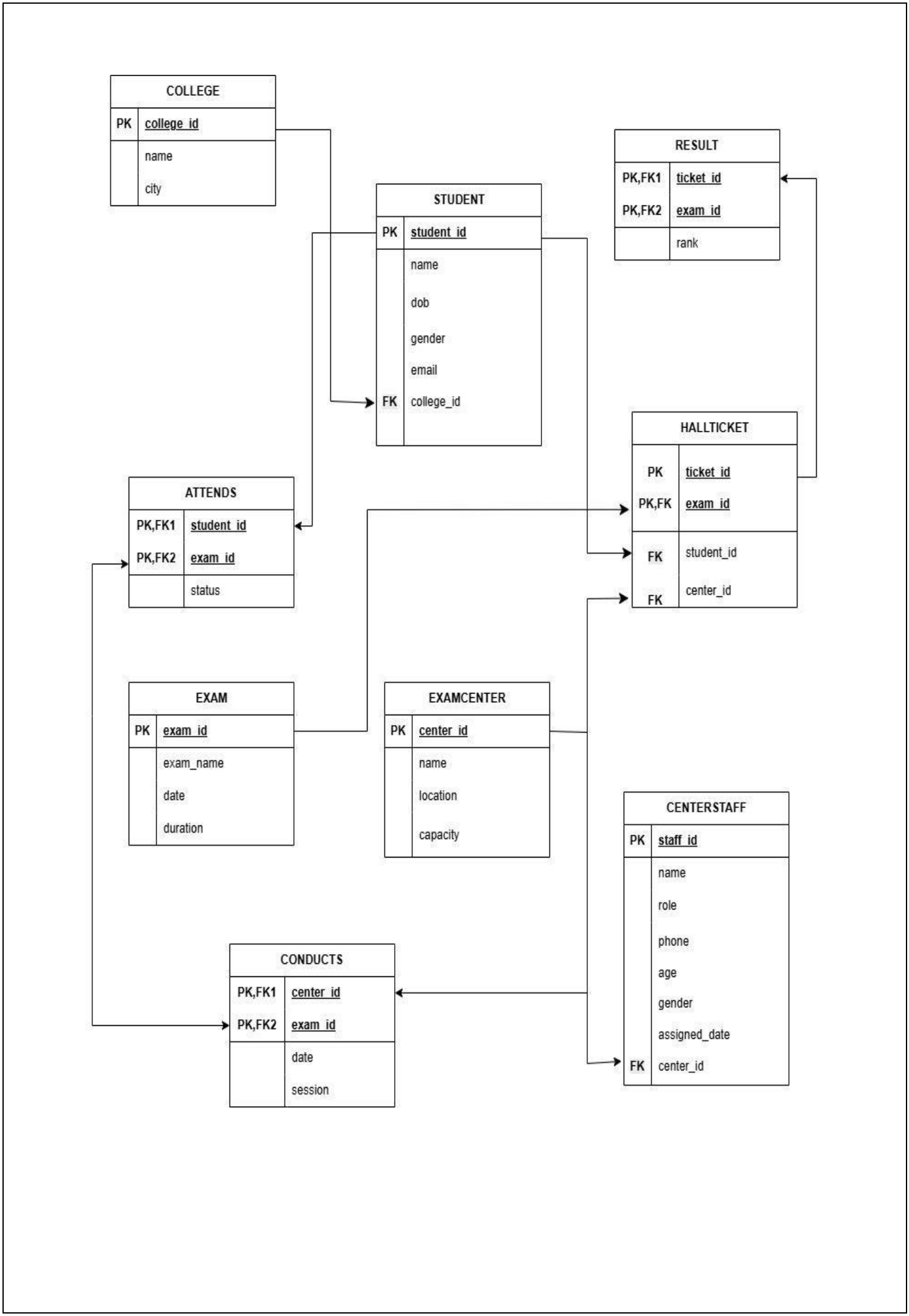
staff assigned to each center, and the results obtained by students. This database helps automate and streamline the entire examination process — from registration to result declaration — and ensures efficient management of resources, accurate tracking of exam attendance, and fair evaluation of students.

ASSUMPTONS:

1. One student can register for multiple exams.
2. One exam can be conducted in multiple exam centers.
3. Each student gets one hall ticket per exam.
4. One exam center can be assigned to multiple exams.
5. One center staff member can be assigned to multiple centers.
6. A student gets only one result per exam.
7. Each hall ticket is associated with one student and one exam.
8. Each exam is conducted on a specific date and session.

ER DIAGRAM:


rank
Result
1
Obtains
1
College_id
Name
City
College
1
Studies
N
Name
DOB
Gender
Student_id
Email
Student
1
Gets
N
ticket_id
Hallticket
N
N
N
Status
Attends
associates
assigned
M
1
1
Exam_id
Exam
N
Conducts
M
Exam_center
name
capacity
location
exam_name
Duration
Date
Date
session
center_id
1
Manages
assigned_date
N
Center_Staff
name
staff_id
age
gender
phone
role


COLLEGE
PK college_id
name
city
STUDENT
PK student_id
name
dob
gender
email
FK college_id
RESULT
PK,FK1 ticket_id
PK,FK2 exam_id
rank
HALLTICKET
PK ticket_id
PK,FK exam_id
FK student_id
FK center_id
ATTENDS
PK,FK1 student_id
PK,FK2 exam_id
status
EXAM
PK exam_id
exam_name
date
duration
EXAMCENTER
PK center_id
name
location
capacity
CENTERSTAFF
PK staff_id
name
role
phone
age
gender
assigned_date
FK center_id
CONDUCTS
PK,FK1 center_id
PK,FK2 exam_id
date
session

NORMALISATION

1. COLLEGE(Attributes: college_id(PK), name, city):

College_id->name
College_id->city
Candidate key: college_id
This is in 1NF,2NF,3NF

2. STUDENT(Attributes: student_id(PK), name, dob, gender, email):

Student_id->name
Student_id->dob
Student_id->gender
Student_id->email
Email->name
Email->dob
Email->gender
Candidate key: student_id

Student_id->email email->name

This is in 1NF,2NF but not in 3NF
STUDENT1(Attributes: student_id(PK), email)
This is in 3NF
STUDENT_INFO(Attributes: email(PK,FK), name, dob, gender)
This is in 3NF

3. EXAM(Attributes: exam_id, exam_name, date, duration):

Exam_id -> exam_name
Exam_id -> duration
Candidate key: exam_id,date

This is in 1NF but not in 2NF,3NF

EXAM_INFO(Attributes: exam_id(PK), exam_name, duration):
This is in 3NF
EXAM_SCHEDULE(Attributes: exam_id(FK), date):
This is in 3NF

4. EXAMCENTER(Attributes: center_id(PK), name, location, capacity):

Center_id->name
Center_id->location
Center_id->capacity
Candidate key: center_id

This is in 1NF,2NF,3NF

5. **CENTERSTAFF(Attributes: staff_id, name, role, phone, age, gender, assigned_date):**

Staff_id->name
Staff_id->phone
Staff_id->age
Staff_id->gender
Staff_id->role
Candidate key : staff_id, assigned_date

2This is in 1NF but not in 2NF,3NF
CENTERSTAFF_INFO(Attributes: staff_id(PK), name, role, phone, age, gender)
This is in 3NF
CENTERSTAFF1(Attributes: staff_id(FK), assigned_date)
This is in 3NF

6. **HALLTICKET(Attributes: ticket_id, student_id, exam_id, center_id):**

Ticket_id, exam_id->student_id
Ticket_id, exam_id ->center_id
Candidate key: Ticket_id, exam_id
This is in 1NF,2NF,3NF

7.RESULT(Attributes: student_id ,exam_id,rank):

Student_id,exam_id->rank
Candidate key: Student_id,exam_id
This is in 1NF,2NF,3NF

8.CONDUCTS(Attributes: exam_id, center_id, date, session):

center_id, date, session -> exam_id
Candidate key: center_id, date, session
This is in 1NF,2NF,3NF

9.ATTENDS(Attributes: student_id ,exam_id,status):

Student_id,exam_id->rank
Candidate key: Student_id,exam_id
This is in 1NF,2NF,3NF

FUNCTIONAL DEPENDENCIES AND PRIMARY KEY:

1.College:

College_id → { Clg_name, Clg_city}

Since all the fields depend on College_id, (College_id) + → R.

Hence, College_id is a primary key.

2.Student:

Student_id → {Student_name, Student_email, Student_clg_id}

Since all the fields depend on Student_id, (Student_id) + → R.

Hence, Student_id is a primary key.

3.Student_info:

Student_email → {Student_name, Student_dob,Student_gender}

Since all the fields depend on Student_email, (Student_email) + → R.

Hence, Student_email is a primary key.

4.Exam_info:

(exam_id) → {exam_name,duration}

Since all the fields depend on (exam_id), (exam_id)+ → R.

Hence, (exam_id) is a primary key.

5.Exam_schedule:

(exam_date) → {exam_id}

Since all the fields depend on (exam_date), (exam_date)+ → R.

Hence, (exam_id) is a primary key.

6.Examcenter:

center_id → {name,location,capacity}

Since all the fields depend on center_id, (center_id) + → R. Hence,

center_id is a primary key.

7.Centerstaff_info:

staff_id → {staff_name, staff_phone,staff_age, gender,center_id}

Since all the fields depend on staff_id, (staff_id) + → R.

Hence, staff_id is a primary key.

8.Centerstaff: staff_id →

{assigned_date}

Since all the fields depend on staff_id, (staff_id) + → R.

Hence, staff_id is a primary key

9.Hall ticket:

{ticket_id,exam_id} → { student_id,center_id}

Since all the fields depend on {ticket_id,exam_id},

{ticket_id,exam_id} + → R.

Hence, {ticket_id,exam_id} is a primary key.

10.Result:

{student_id,exam_id} → { rank}

Since all the fields depend on { student_id,exam_id},

{ student_id,exam_id} + → R.

Hence, { student_id,exam_id} is a primary key.

11.Conducts:

{center_id,date,session} → { exam_id}

Since all the fields depend on {center_id,date,session },

{center_id,date,session } + → R.

Hence, {center_id,date,session } is a primary key.

12.Attends:

{student_id,exam_id}→ { status}

Since all the fields depend on { student_id,exam_id },

{ student_id,exam_id } + → R.

Hence, { student_id,exam_id } is a primary key.

TABLES:

COLLEGE:

Attributes	Datatypes	Constraints
College_id	Int	Primary key
College_name	Varchar(50)	NOT NULL
College_city	Varchar(50)	NOT NULL

STUDENT:

Attributes	Datatypes	Constraints
Student_id	int	Primary key
Student_email	Varchar(50)	NOT NULL
Student_clg_id	int	Foreign key

STUDENT_INFO:

Attributes	Datatypes	Constraints
Student_email	Varchar(50)	Primary key(FK)
Student_name	Varchar(30)	NOT NULL
Student_dob	Date	NOT NULL
Student_gender	Varchar(10)	NOT NULL

EXAM_INFO:

Attributes	Datatypes	Constraints
Exam_id	Int	Primary key
Exam_name	Varchar(50)	NOT NULL
Exam_duration	Int	NOT NULL

Exam_schedule:

Attributes	Datatypes	Constraints
Exam_id	Int	Primary key (FK)
Exam_Date	bool	Primary Key

EXAM_CENTER:

Attributes	Datatypes	Constraints
center_id	Int	Primary key
center_name	Varchar(30)	NOT NULL
Center_location	Varchar(50)	NOT NULL
capacity	Int	NOT NULL

CENTERSTAFF_INFO:

Attributes	Datatypes	Constraints
staff_id	Varchar(10)	Primary key
staff_name	Varchar(30)	NOT NULL
Staff_role	Varchar(30)	NOT NULL
staff_phone	Int	Unique
staff_age	Int	NOT NULL
Center_id	int	Foreign key

CENTERSTAFF:

Attributes	Datatypes	Constraints
staff_id	Int	Primary key (FK)
assigned_date	DATE	Primary key

HallTicket:

Attributes	Datatypes	Constraints
ticket_id	Int	Primary key
Exam_id	Int	Primary key(FK)
Student_id	Int	Foreign Key
Center_id	Int	Foreign Key

RESULT:

Attributes	Datatypes	Constraints
student_id	int	Primary key (FK1)
Exam_id	int	Primary key (FK2)
rank	Int	Unique

CONDUCTS:

Attributes	Datatypes	Constraints
Center_id	Int	Primary key (FK1)
Exam_id	Int	Foreign key
date	date	Primary key
session	Varchar(2)	Primary key

ATTENDS:

Attributes	Datatypes	Constraints
student_id	int	Primary key (FK1)
Exam_id	int	Primary key (FK2)
Status	varchar	NOT NULL

ORACLE CODES:

Creating Tables:

```
-- 1. COLLEGE
CREATE TABLE COLLEGE (
    college_id INT PRIMARY KEY,
    name VARCHAR(20),
    city VARCHAR(20)
);
```

```sql
-- 2. STUDENT1
CREATE TABLE STUDENT1 (
    student_id INT PRIMARY KEY,
    email VARCHAR(20) UNIQUE,
    college_id INT,
    FOREIGN KEY (college_id) REFERENCES COLLEGE(college_id)
);

-- 3. STUDENT_INFO
CREATE TABLE STUDENT_INFO (
    email VARCHAR(20) PRIMARY KEY,
    name VARCHAR(20),
    dob DATE,
    gender CHAR(1),
    FOREIGN KEY (email) REFERENCES STUDENT1(email)
);


-- 4. EXAM_INFO
CREATE TABLE EXAM_INFO (
    exam_id INT PRIMARY KEY,
    exam_name VARCHAR(20),
    duration INT
);
```

```sql
-- 5. EXAM_SCHEDULE
CREATE TABLE EXAM_SCHEDULE (
    exam_id INT,
    datee DATE,
    PRIMARY KEY (exam_id, datee),
    FOREIGN KEY (exam_id) REFERENCES EXAM_INFO(exam_id)
);

 CREATE TABLE EXAMCENTER (
     center_id INT PRIMARY KEY,
     name VARCHAR(20),
     location VARCHAR(20),
     capacity INT
 );


-- 7. CENTERSTAFF_INFO
CREATE TABLE CENTERSTAFF_INFO (
    staff_id INT PRIMARY KEY,
    name VARCHAR(20),
    role VARCHAR(20),
    phone VARCHAR(15),
    age INT,
    gender CHAR(1),
    center_id INT,
    FOREIGN KEY (center_id) REFERENCES EXAMCENTER(center_id)
);


-- 8. CENTERSTAFF1
CREATE TABLE CENTERSTAFF1 (
    staff_id INT,
    assigned_date DATE,
    PRIMARY KEY (staff_id, assigned_date),
    FOREIGN KEY (staff_id) REFERENCES CENTERSTAFF_INFO(staff_id)
);
```

```sql
-- 9. HALLTICKET
CREATE TABLE HALLTICKET (
    ticket_id INT,
    student_id INT,
    exam_id INT,
    center_id INT,
    PRIMARY KEY (ticket_id, exam_id),
    FOREIGN KEY (student_id) REFERENCES STUDENT1(student_id),
    FOREIGN KEY (exam_id) REFERENCES EXAM_INFO(exam_id),
    FOREIGN KEY (center_id) REFERENCES EXAMCENTER(center_id)
);
CREATE TABLE RESULT (
    student_id INT,
    exam_id INT,
    rank INT,
    PRIMARY KEY (student_id, exam_id),
    FOREIGN KEY (student_id) REFERENCES STUDENT1(student_id),
    FOREIGN KEY (exam_id) REFERENCES EXAM_INFO(exam_id)
);
-- 11. CONDUCTS
CREATE TABLE CONDUCTS (
    exam_id INT,
    center_id INT,
    datee DATE,
    sessionn VARCHAR(2) CHECK (sessionn IN ('FN', 'AN')),
    PRIMARY KEY (center_id, datee, sessionn),
    FOREIGN KEY (exam_id) REFERENCES EXAM_INFO(exam_id),
    FOREIGN KEY (center_id) REFERENCES EXAMCENTER(center_id)
);
CREATE TABLE ATTENDS (
    student_id INT,
    exam_id INT,
    status VARCHAR(20),
    PRIMARY KEY (student_id, exam_id),
    FOREIGN KEY (student_id) REFERENCES STUDENT1(student_id),
    FOREIGN KEY (exam_id) REFERENCES EXAM_INFO(exam_id)
);
```

INSERTING VALUES:

1.COLLEGE

```
INSERT INTO college VALUES (1, 'NIT Warangal', 'Warangal');
INSERT INTO college VALUES (2, 'IIT Madras', 'Chennai');
INSERT INTO college VALUES (3, 'BITS Pilani', 'Pilani');
INSERT INTO college VALUES (4, 'IIT Bombay', 'Mumbai');
INSERT INTO college VALUES (5, 'IIIT Hyderabad', 'Hyderabad');
```

2.STUDENT1

```
INSERT INTO Student1 VALUES (101, 's101@college.com', 1);
INSERT INTO Student1 VALUES (102, 's102@college.com', 2);
INSERT INTO Student1 VALUES (103, 's103@college.com', 3);
INSERT INTO Student1 VALUES (104, 's104@college.com', 1);
INSERT INTO Student1 VALUES (105, 's105@college.com', 4);
INSERT INTO Student1 VALUES (106, 's106@college.com', 2);
INSERT INTO Student1 VALUES (107, 's107@college.com', 5);
INSERT INTO Student1 VALUES (108, 's108@college.com', 3);
INSERT INTO Student1 VALUES (109, 's109@college.com', 4);
INSERT INTO Student1 VALUES (110, 's110@college.com', 1); id)
INSERT INTO Student1 VALUES (111, 's111@college.com', 5);
INSERT INTO Student1 VALUES (112, 's112@college.com', 1);
INSERT INTO Student1 VALUES (113, 's113@college.com', 2);
INSERT INTO Student1 VALUES (114, 's114@college.com', 3);
INSERT INTO Student1 VALUES (115, 's115@college.com', 1);
```

3.STUDENT_INFO

```
INSERT INTO Student_info VALUES ('s101@college.com', 'kavya', TO_DATE('2001-02-22', 'YYYY-MM-DD'), 'M');
INSERT INTO Student_info VALUES ('s102@college.com', 'vikram', TO_DATE('2005-07-18', 'YYYY-MM-DD'), 'F');
INSERT INTO Student_info VALUES ('s103@college.com', 'ananya', TO_DATE('2002-01-11', 'YYYY-MM-DD'), 'F');
INSERT INTO Student_info VALUES ('s104@college.com', 'arjun', TO_DATE('2000-03-27', 'YYYY-MM-DD'), 'M');
INSERT INTO Student_info VALUES ('s105@college.com', 'ishitha', TO_DATE('2001-05-21', 'YYYY-MM-DD'), 'F');
INSERT INTO Student_info VALUES ('s106@college.com', 'aarav', TO_DATE('2000-04-26', 'YYYY-MM-DD'), 'M');
INSERT INTO Student_info VALUES ('s107@college.com', 'meera', TO_DATE('2002-09-11', 'YYYY-MM-DD'), 'F');
INSERT INTO Student_info VALUES ('s108@college.com', 'aditha', TO_DATE('2004-02-14', 'YYYY-MM-DD'), 'M');
INSERT INTO Student_info VALUES ('s109@college.com', 'shruthi', TO_DATE('2005-07-19', 'YYYY-MM-DD'), 'M');
INSERT INTO Student_info VALUES ('s110@college.com', 'rajesh', TO_DATE('2000-04-10', 'YYYY-MM-DD'), 'F');
INSERT INTO Student_info VALUES ('s111@college.com', 'vishwa', TO_DATE('2000-01-21', 'YYYY-MM-DD'), 'F');
INSERT INTO Student_info VALUES ('s112@college.com', 'nandini', TO_DATE('2002-06-16', 'YYYY-MM-DD'), 'M');
INSERT INTO Student_info VALUES ('s113@college.com', 'rohan', TO_DATE('2002-03-28', 'YYYY-MM-DD'), 'M');
INSERT INTO Student_info VALUES ('s114@college.com', 'karthik', TO_DATE('2005-03-19', 'YYYY-MM-DD'), 'F');
INSERT INTO Student_info VALUES ('s115@college.com', 'yashwanth', TO_DATE('2000-06-10', 'YYYY-MM-DD'), 'M');
```

4.EXAM_INFO

```
INSERT INTO exam_info VALUES (1, 'JEE Main', 180);
INSERT INTO exam_info VALUES (2, 'NEET', 180);
INSERT INTO exam_info VALUES (3, 'CUET', 180);
INSERT INTO exam_info VALUES (4, 'GATE', 180);
INSERT INTO exam_info VALUES (5, 'UGC NET', 180);
```

5.EXAM_SCHEDULE

```
INSERT INTO exam_schedule VALUES (4, TO_DATE('2025-07-01', 'YYYY-MM-DD'));
INSERT INTO exam_schedule VALUES (2, TO_DATE('2025-07-02', 'YYYY-MM-DD'));
INSERT INTO exam_schedule VALUES (4, TO_DATE('2025-07-03', 'YYYY-MM-DD'));
INSERT INTO exam_schedule VALUES (2, TO_DATE('2025-07-04', 'YYYY-MM-DD'));
INSERT INTO exam_schedule VALUES (2, TO_DATE('2025-07-05', 'YYYY-MM-DD'));
INSERT INTO exam_schedule VALUES (4, TO_DATE('2025-07-06', 'YYYY-MM-DD'));
INSERT INTO exam_schedule VALUES (1, TO_DATE('2025-07-07', 'YYYY-MM-DD'));
INSERT INTO exam_schedule VALUES (1, TO_DATE('2025-07-08', 'YYYY-MM-DD'));
INSERT INTO exam_schedule VALUES (2, TO_DATE('2025-07-09', 'YYYY-MM-DD'));
INSERT INTO exam_schedule VALUES (2, TO_DATE('2025-07-10', 'YYYY-MM-DD'));
INSERT INTO exam_schedule VALUES (2, TO_DATE('2025-07-11', 'YYYY-MM-DD'));
INSERT INTO exam_schedule VALUES (5, TO_DATE('2025-07-12', 'YYYY-MM-DD'));
INSERT INTO exam_schedule VALUES (4, TO_DATE('2025-07-13', 'YYYY-MM-DD'));
INSERT INTO exam_schedule VALUES (3, TO_DATE('2025-07-14', 'YYYY-MM-DD'));
INSERT INTO exam_schedule VALUES (2, TO_DATE('2025-07-15', 'YYYY-MM-DD'));
```

6.EXAMCENTER:

```
INSERT INTO examcenter VALUES (11, 'Center A', 'Delhi', 300);
INSERT INTO examcenter VALUES (12, 'Center B', 'Mumbai', 350);
INSERT INTO examcenter VALUES (13, 'Center C', 'Chennai', 400);
INSERT INTO examcenter VALUES (14, 'Center D', 'Hyderabad', 320);
INSERT INTO examcenter VALUES (15, 'Center E', 'Bangalore', 280);
```

7.CENTERSTAFF_INFO

```
INSERT INTO centerstaff_info VALUES (501, 'Abdul', 'Clerk', 986178502, 35, 'M', 14);
INSERT INTO centerstaff_info VALUES (502, 'Priya', 'Support', 973754999, 39, 'F', 11);
INSERT INTO centerstaff_info VALUES (503, 'Ravi', 'Clerk', 985778517, 45, 'F', 12);
INSERT INTO centerstaff_info VALUES (504, 'Meena', 'Security', 934939145, 32, 'M', 13);
INSERT INTO centerstaff_info VALUES (505, 'John', 'Security', 973501109, 38, 'F', 13);
INSERT INTO centerstaff_info VALUES (506, 'Lakshmi', 'Invigilator', 984143956, 37, 'F', 11);
INSERT INTO centerstaff_info VALUES (507, 'Karan', 'Security', 932657402, 40, 'F', 14);
INSERT INTO centerstaff_info VALUES (508, 'Ravi', 'Support', 944269049, 30, 'F', 15);
```

8.CENTERSTAFF:

```
INSERT INTO centerstaff1 VALUES (501, TO_DATE('2025-07-01', 'YYYY-MM-DD'));
INSERT INTO centerstaff1 VALUES (504, TO_DATE('2025-07-02', 'YYYY-MM-DD'));
INSERT INTO centerstaff1 VALUES (507, TO_DATE('2025-07-03', 'YYYY-MM-DD'));
INSERT INTO centerstaff1 VALUES (501, TO_DATE('2025-07-04', 'YYYY-MM-DD'));
INSERT INTO centerstaff1 VALUES (504, TO_DATE('2025-07-05', 'YYYY-MM-DD'));
INSERT INTO centerstaff1 VALUES (505, TO_DATE('2025-07-06', 'YYYY-MM-DD'));
INSERT INTO centerstaff1 VALUES (506, TO_DATE('2025-07-07', 'YYYY-MM-DD'));
INSERT INTO centerstaff1 VALUES (502, TO_DATE('2025-07-08', 'YYYY-MM-DD'));
INSERT INTO centerstaff1 VALUES (508, TO_DATE('2025-07-09', 'YYYY-MM-DD'));
INSERT INTO centerstaff1 VALUES (507, TO_DATE('2025-07-10', 'YYYY-MM-DD'));
INSERT INTO centerstaff1 VALUES (504, TO_DATE('2025-07-11', 'YYYY-MM-DD'));
INSERT INTO centerstaff1 VALUES (503, TO_DATE('2025-07-12', 'YYYY-MM-DD'));
INSERT INTO centerstaff1 VALUES (503, TO_DATE('2025-07-13', 'YYYY-MM-DD'));
INSERT INTO centerstaff1 VALUES (502, TO_DATE('2025-07-14', 'YYYY-MM-DD'));
INSERT INTO centerstaff1 VALUES (506, TO_DATE('2025-07-15', 'YYYY-MM-DD'));
```

9.HALLTICKET

```
INSERT INTO hallticket VALUES (1001, 101, 2, 12);
INSERT INTO hallticket VALUES (1002, 101, 1, 11);
INSERT INTO hallticket VALUES (1003, 102, 5, 11);
INSERT INTO hallticket VALUES (1004, 103, 1, 14);
INSERT INTO hallticket VALUES (1005, 103, 2, 15);
INSERT INTO hallticket VALUES (1006, 104, 4, 13);
INSERT INTO hallticket VALUES (1007, 104, 3, 14);
INSERT INTO hallticket VALUES (1008, 105, 2, 12);
INSERT INTO hallticket VALUES (1009, 106, 2, 11);
INSERT INTO hallticket VALUES (1010, 106, 4, 13);
INSERT INTO hallticket VALUES (1011, 107, 4, 13);
INSERT INTO hallticket VALUES (1012, 107, 2, 15);
INSERT INTO hallticket VALUES (1013, 108, 3, 12);
INSERT INTO hallticket VALUES (1014, 109, 1, 12);
INSERT INTO hallticket VALUES (1015, 109, 5, 12);
INSERT INTO hallticket VALUES (1016, 110, 5, 11);
```

```
INSERT INTO hallticket VALUES (1020, 113, 2, 11);
INSERT INTO hallticket VALUES (1021, 114, 4, 14);
INSERT INTO hallticket VALUES (1022, 114, 2, 11);
INSERT INTO hallticket VALUES (1023, 115, 1, 14);
INSERT INTO hallticket VALUES (1024, 115, 3, 13);
INSERT INTO hallticket VALUES (1025, 102, 2, 11);
INSERT INTO hallticket VALUES (1026, 102, 1, 11);
INSERT INTO hallticket VALUES (1027, 104, 1, 13);
INSERT INTO hallticket VALUES (1028, 108, 1, 12);
INSERT INTO hallticket VALUES (1029, 109, 2, 14);
INSERT INTO hallticket VALUES (1030, 110, 2, 13);
INSERT INTO hallticket VALUES (1031, 111, 2, 13);
INSERT INTO hallticket VALUES (1032, 112, 1, 12);
```

10.RESULT:

```
INSERT INTO result VALUES (101, 1, 74);
INSERT INTO result VALUES (102, 1, 94);
INSERT INTO result VALUES (102, 2, 83);
INSERT INTO result VALUES (104, 1, 38);
INSERT INTO result VALUES (106, 2, 80);
INSERT INTO result VALUES (107, 1, 87);
INSERT INTO result VALUES (107, 2, 80);
INSERT INTO result VALUES (108, 1, 39);
INSERT INTO result VALUES (108, 2, 56);
INSERT INTO result VALUES (109, 2, 77);
INSERT INTO result VALUES (110, 1, 84);
INSERT INTO result VALUES (110, 2, 36);
INSERT INTO result VALUES (111, 2, 48);
INSERT INTO result VALUES (112, 1, 39);
INSERT INTO result VALUES (114, 2, 72);
INSERT INTO result VALUES (115, 1, 72);
INSERT INTO result VALUES (115, 2, 76);
INSERT INTO result VALUES (101, 3, 61);
INSERT INTO result VALUES (101, 5, 66);
INSERT INTO result VALUES (102, 3, 88);
INSERT INTO result VALUES (102, 4, 75);
```

11.ATTENDS

```
INSERT INTO attends VALUES (101, 1, 'Present');
INSERT INTO attends VALUES (101, 2, 'Absent');
INSERT INTO attends VALUES (102, 1, 'Present');
INSERT INTO attends VALUES (102, 2, 'Present');
INSERT INTO attends VALUES (103, 1, 'Absent');
INSERT INTO attends VALUES (103, 2, 'Absent');
INSERT INTO attends VALUES (104, 1, 'Present');
INSERT INTO attends VALUES (104, 2, 'Absent');
INSERT INTO attends VALUES (105, 1, 'Present');
INSERT INTO attends VALUES (105, 2, 'Absent');

INSERT INTO attends VALUES (108, 1, 'Present');
INSERT INTO attends VALUES (108, 2, 'Present');
INSERT INTO attends VALUES (109, 1, 'Absent');
INSERT INTO attends VALUES (109, 2, 'Present');
INSERT INTO attends VALUES (110, 1, 'Present');
INSERT INTO attends VALUES (110, 2, 'Present');
INSERT INTO attends VALUES (111, 1, 'Absent');
INSERT INTO attends VALUES (111, 2, 'Present');
INSERT INTO attends VALUES (112, 1, 'Present');
INSERT INTO attends VALUES (112, 2, 'Absent');
INSERT INTO attends VALUES (113, 2, 'Absent');
INSERT INTO attends VALUES (114, 1, 'Absent');
INSERT INTO attends VALUES (114, 2, 'Present');
INSERT INTO attends VALUES (115, 1, 'Present');
INSERT INTO attends VALUES (115, 2, 'Absent');
INSERT INTO attends VALUES (101, 3, 'Present');
INSERT INTO attends VALUES (101, 4, 'Absent');
INSERT INTO attends VALUES (101, 5, 'Present');
INSERT INTO attends VALUES (102, 3, 'Present');
INSERT INTO attends VALUES (102, 4, 'Present');
INSERT INTO attends VALUES (102, 5, 'Present');
```

12.CONDUCTS:

```
INSERT INTO conducts VALUES (4, 15, TO_DATE('2025-07-01', 'YYYY-MM-DD'), 'FN');
INSERT INTO conducts VALUES (2, 14, TO_DATE('2025-07-02', 'YYYY-MM-DD'), 'AN');
INSERT INTO conducts VALUES (4, 14, TO_DATE('2025-07-03', 'YYYY-MM-DD'), 'FN');
INSERT INTO conducts VALUES (2, 13, TO_DATE('2025-07-04', 'YYYY-MM-DD'), 'AN');
INSERT INTO conducts VALUES (2, 11, TO_DATE('2025-07-05', 'YYYY-MM-DD'), 'FN');
INSERT INTO conducts VALUES (4, 12, TO_DATE('2025-07-06', 'YYYY-MM-DD'), 'AN');
INSERT INTO conducts VALUES (1, 11, TO_DATE('2025-07-07', 'YYYY-MM-DD'), 'FN');
INSERT INTO conducts VALUES (1, 12, TO_DATE('2025-07-08', 'YYYY-MM-DD'), 'AN');
INSERT INTO conducts VALUES (2, 13, TO_DATE('2025-07-09', 'YYYY-MM-DD'), 'AN');
INSERT INTO conducts VALUES (2, 14, TO_DATE('2025-07-10', 'YYYY-MM-DD'), 'AN');
INSERT INTO conducts VALUES (2, 15, TO_DATE('2025-07-11', 'YYYY-MM-DD'), 'FN');
INSERT INTO conducts VALUES (5, 15, TO_DATE('2025-07-12', 'YYYY-MM-DD'), 'AN');
INSERT INTO conducts VALUES (4, 13, TO_DATE('2025-07-13', 'YYYY-MM-DD'), 'FN');
INSERT INTO conducts VALUES (3, 14, TO_DATE('2025-07-14', 'YYYY-MM-DD'), 'FN');
INSERT INTO conducts VALUES (2, 12, TO_DATE('2025-07-15', 'YYYY-MM-DD'), 'AN');
INSERT INTO conducts VALUES (1, 13, TO_DATE('2025-07-09', 'YYYY-MM-DD'), 'FN');
INSERT INTO conducts VALUES (3, 12, TO_DATE('2025-07-14', 'YYYY-MM-DD'), 'AN');
```

TABLES:

COLLEGE:

	COLLEGE_ID	NAME	CITY
1	1	NIT Warangal	Warangal
2	2	IIT Madras	Chennai
3	3	BITS Pilani	Pilani
4	4	IIT Bombay	Mumbai
5	5	IIIT Hyderabad	Hyderabad

STUDENT:

	STUDENT_ID	EMAIL	COLLEGE_ID
1	101	s101@college.com	1
2	102	s102@college.com	2
3	103	s103@college.com	3
4	104	s104@college.com	1
5	105	s105@college.com	4
6	106	s106@college.com	2
7	107	s107@college.com	5
8	108	s108@college.com	3
9	109	s109@college.com	4
10	110	s110@college.com	1
11	111	s111@college.com	5
12	112	s112@college.com	1
13	113	s113@college.com	2
14	114	s114@college.com	3

STUDENT_INFO:

	EMAIL	NAME	DOB	GENDER
1	s101@college.com	kavya	22-02-01	M
2	s102@college.com	vikram	18-07-05	F
3	s103@college.com	ananya	11-01-02	F
4	s104@college.com	arjun	27-03-00	M
5	s105@college.com	ishitha	21-05-01	F
6	s106@college.com	aarav	26-04-00	M
7	s107@college.com	meera	11-09-02	F
8	s108@college.com	aditha	14-02-04	M
9	s109@college.com	shruthi	19-07-05	M
10	s110@college.com	rajesh	10-04-00	F
11	s111@college.com	vishwa	21-01-00	F
12	s112@college.com	nandini	16-06-02	M
13	s113@college.com	rohan	28-03-02	M
14	s114@college.com	karthik	19-03-05	F

EXAM_INFO:

	EXAM_ID	EXAM_NAME	DURATION
1	1	JEE Main	180
2	2	NEET	180
3	3	CUET	180
4	4	GATE	180
5	5	UGC NET	180

EXAM_CENTER

	CENTER_ID	NAME	LOCATION	CAPACITY
1	11	Center A	Delhi	300
2	12	Center B	Mumbai	350
3	13	Center C	Chennai	400
4	14	Center D	Hyderabad	320
5	15	Center E	Bangalore	280

EXAM_SCHEDULE:

	EXAM_ID	DATEE
1	4	01-07-25
2	2	02-07-25
3	4	03-07-25
4	2	04-07-25
5	2	05-07-25
6	4	06-07-25
7	1	07-07-25
8	1	08-07-25
9	2	09-07-25
10	2	10-07-25
11	2	11-07-25
12	5	12-07-25
13	4	13-07-25
14	3	14-07-25
15	2	15-07-25

CENTERSTAFF_INFO:

	STAFF_ID	NAME	ROLE	PHONE	AGE	GENDER	CENTER_ID
1	501	Abdul	Clerk	986178502	35	M	14
2	502	Priya	Support	973754999	39	F	11
3	503	Ravi	Clerk	985778517	45	F	12
4	504	Meena	Security	934939145	32	M	13
5	505	John	Security	973501109	38	F	13
6	506	Lakshmi	Invigilator	984143956	37	F	11
7	507	Karan	Security	932657402	40	F	14

CENTERSTAFF:

	STAFF_ID	ASSIGNED_DATE
1	501	01-07-25
2	504	02-07-25
3	507	03-07-25
4	501	04-07-25
5	504	05-07-25
6	505	06-07-25
7	506	07-07-25
8	502	08-07-25
9	508	09-07-25
10	507	10-07-25
11	504	11-07-25
12	503	12-07-25
13	503	13-07-25
14	502	14-07-25
15	506	15-07-25

HALLTICKET:

	TICKET_ID	STUDENT_ID	EXAM_ID	CENTER_ID
1	1001	101	2	12
2	1002	101	1	11
3	1003	102	5	11
4	1004	103	1	14
5	1005	103	2	15
6	1006	104	4	13
7	1007	104	3	14
8	1008	105	2	12
9	1009	106	2	11
10	1010	106	4	13
11	1011	107	4	13
12	1012	107	2	15

RESULT:

	STUDENT_ID	EXAM_ID	RANK
1	101	1	74
2	102	1	94
3	102	2	83
4	104	1	38
5	106	2	80
6	107	1	87
7	107	2	80
8	108	1	39
9	108	2	56
10	109	2	77
11	110	1	84
12	110	2	36

CONDUCTS:

	EXAM_ID	CENTER_ID	DATEE	SESSIONN
1	4	15	01-07-25	FN
2	2	14	02-07-25	AN
3	4	14	03-07-25	FN
4	2	13	04-07-25	AN
5	2	11	05-07-25	FN
6	4	12	06-07-25	AN
7	1	11	07-07-25	FN
8	1	12	08-07-25	AN
9	2	13	09-07-25	AN
10	2	14	10-07-25	AN
11	2	15	11-07-25	FN
12	5	15	12-07-25	AN
13	4	13	13-07-25	FN
14	3	14	14-07-25	FN

ATTENDS:

	STUDENT_ID	EXAM_ID	STATUS
1	101	1	Present
2	101	2	Absent
3	102	1	Present
4	102	2	Present
5	103	1	Absent
6	103	2	Absent
7	104	1	Present
8	104	2	Absent
9	105	1	Present
10	105	2	Absent
11	106	1	Absent
12	106	2	Present
13	107	1	Present

QUERIES:

1. **Display the names and ranks of students who scored rank less than 50 in JEE Main.**

```
SELECT si.name, r.rank
FROM result r
JOIN student1 s ON r.student_id = s.student_id
JOIN student_info si ON s.email = si.email
JOIN exam_info e ON r.exam_id = e.exam_id
WHERE r.rank < 50 AND e.exam_name = 'JEE Main';
```

	NAME	RANK
1	arjun	38
2	aditha	39
3	nandini	39

2. **Display the names of students who attended the 'NEET' exam but didn't get a result.**

```
SELECT si.name
FROM attends a
JOIN student1 s ON a.student_id = s.student_id
JOIN student_info si ON s.email = si.email
JOIN exam_info e ON a.exam_id = e.exam_id
WHERE e.exam_name = 'NEET'
AND NOT EXISTS (
    SELECT 1 FROM result r
    WHERE r.student_id = a.student_id AND r.exam_id = a.exam_id
);
```

	NAME
1	kavya
2	ananya
3	arjun
4	ishitha
5	nandini
6	rohan

3. **Display all exam centers that conducted exams on '2025-07-12'.**

```
SELECT ec.name, ec.location
FROM conducts c
JOIN examcenter ec ON c.center_id = ec.center_id
WHERE c.datee = TO_DATE('2025-07-12', 'YYYY-MM-DD');
```

	NAME	LOCATION
1	Center A	Delhi
2	Center B	Mumbai
3	Center C	Chennai
4	Center E	Bangalore

4. **Display students who attended all the exams they registered for.**

```
SELECT si.name
FROM student1 s
JOIN student_info si ON s.email = si.email
WHERE NOT EXISTS (
    SELECT 1
    FROM hallticket h
    WHERE h.student_id = s.student_id
    AND NOT EXISTS (
        SELECT 1 FROM attends a
        WHERE a.student_id = h.student_id AND a.exam_id = h.exam_id
    )
);
```

	NAME
1	meera
2	rohan
3	aditha
4	shruthi
5	ishitha
6	rajesh

5. **Display the total number of students assigned to each exam center.**

```
SELECT ec.name, COUNT(DISTINCT h.student_id) AS total_students
FROM hallticket h
JOIN examcenter ec ON h.center_id = ec.center_id
GROUP BY ec.name;
```

	NAME	TOTAL_STUDENTS
1	Center B	5
2	Center A	6
3	Center D	5
4	Center E	2
5	Center C	7

THANK YOU

HARSHITHA 23CSB0A28

VARDHITHA 23CSB0A52