**CODING CHALLENGE -2**

1.

create database Carrerhub;

Use Carrerhub;

2.

CREATE TABLE Companies (

CompanyID INT PRIMARY KEY,

CompanyName VARCHAR(100) NOT NULL,

Location VARCHAR(100) NOT NULL

);

CREATE TABLE Jobs (

JobID INT PRIMARY KEY,

CompanyID INT NOT NULL,

JobTitle VARCHAR(100) NOT NULL,

JobDescription VARCHAR(MAX),

JobLocation VARCHAR(100),

Salary DECIMAL(10,2) CHECK (Salary >= 0),

JobType VARCHAR(50),

PostedDate VARCHAR(15),

FOREIGN KEY (CompanyID) REFERENCES Companies(CompanyID)

);

CREATE TABLE Applicants (

ApplicantID INT PRIMARY KEY,

FirstName VARCHAR(50) NOT NULL,

LastName VARCHAR(50) NOT NULL,

Email VARCHAR(100) UNIQUE NOT NULL,

Phone VARCHAR(20),

Resume VARCHAR(MAX)

);

CREATE TABLE Applications (

ApplicationID INT PRIMARY KEY,

JobID INT NOT NULL,

ApplicantID INT NOT NULL,

ApplicationDate DATETIME),

CoverLetter VARCHAR(MAX),

FOREIGN KEY (JobID) REFERENCES Jobs(JobID),

FOREIGN KEY (ApplicantID) REFERENCES Applicants(ApplicantID)

);

3.

INSERT INTO Companies (CompanyID, CompanyName, Location) VALUES

(1, 'Hexaware', 'Chennai'),

(2, 'ABC Corporation', 'Coimbatore'),

(3, 'XYZ Technologies', 'Hyderabad'),

(4, 'Global solutions', 'CityX'),

(5, 'Technoz','City Z'),

(6, 'Infotech', 'Banglore'),

(7, 'Infopark','CityX');

INSERT INTO Jobs (JobID, CompanyID, JobTitle, JobDescription, JobLocation, Salary, JobType, PostedDate) VALUES(101, 1, 'Java Developer', 'Develop and maintain Java apps using Spring and APIs.', 'Chennai', 500000.00, 'Full-time','2025-01-02'),

(102, 2, 'Data Analyst', 'Analyze data using SQL and Power BI for reports.', 'Coimbatore', 500000.00, 'Full-time', '2025-01-10'),

(103, 3, '.Net Developer', 'Work on .NET apps with C# and SQL Server.', 'Hyderabad', 600000.00, 'Full-time','2025-01-12'),

(104, 4, 'Associate Analyst', 'Create digital learning content for students.', 'City X', 350000.00, 'Full-time', '2025-01-19'),

(105, 5, 'SAP Analyst', 'Prepare finance reports using SAP tools.', 'CityX', 40000.00, 'Full-time', '2025-01-23'),

(106, 6, 'DevOps Engineer', 'Automate deployments and manage cloud infra.',

'Banglore', 450000.00, 'Contract', '2025-01-25'),

(107, 7, 'UI/UX Designer', 'Design user-friendly interfaces and layouts.',

'Kochi', 390000.00, 'Full-time', '2025-01-28');

INSERT INTO Applicants (ApplicantID, FirstName, LastName, Email, Phone, Resume) VALUES

(201, 'Ravi', 'Kumar', 'ravikumar@gmail.com', '8825804419', '4 years of experience in Java development.'),

(202, 'Pooja', 'Shree', 'poojashree@gmail.com', '9445737210', 'Skilled in data analytics and Excel dashboards.'),

(203, 'Ananya', 'Verma', 'verma@gmail.com', '9976373991', 'Managed .Net projects in healthcare with ASP.NET and SQL Server.'),

(204, 'Neha', 'Singh', 'nehasingh@gmail.com', '9688727570', 'MBA graduate with interest in finance.'),

(205, 'Anil', 'Varma', 'anil@gmail.com', '9292763780', 'Experienced in SAP and business analysis.'),

(206, 'Suresh', 'Babu', 'suresh@gmail.com', '9688405749', 'DevOps engineer skilled in AWS and CI/CD tools.'),

(207, 'Anjali', 'Nair', 'anjali@gmail.com', '9787205573', 'UI/UX designer with a portfolio of mobile apps.');

INSERT INTO Applications (ApplicationID, JobID, ApplicantID, ApplicationDate, CoverLetter) VALUES

(301, 101, 201, '2024-08-10 09:30:00', 'I am excited to apply for the Java Developer role. I bring 4 years of hands-on Java experience.'),

(302, 102, 202, '2024-07-19 11:15:00', 'With strong skills in analytics and dashboards, I am eager to contribute as a Data Analyst.'),

(303, 103, 203, '2024-06-20 09:45:00', 'As an experienced project manager in healthcare, I am a great fit for your .Net Developer role.'),

(304, 104, 204, '2024-09-21 12:20:00', 'My academic background in finance and communication skills align well with the Content Writer position.'),

(305, 105, 205, '2024-10-25 10:00:00', 'Experienced in SAP and financial reporting, I am interested in this SAP Consultant opportunity.'),

(306, 106, 206, '2024-11-13 15:30:00', 'My DevOps experience with AWS and CI/CD will benefit your infrastructure and deployment goals.'),

(307, 107, 207, '2024-11-15 13:45:00', 'As a UI/UX designer, I can bring creativity and usability to your Design team.');

4.Checked

5.

SELECT J.JobTitle, COUNT(A.ApplicationID) AS ApplicationCount FROM Jobs J

LEFT JOIN Applications A ON J.JobID = A.JobID

GROUP BY J.JobTitle;

6.

select min(salary), max(salary) from Jobs;

SELECT J.JobTitle, C.CompanyName, J.JobLocation, J.Salary

FROM Jobs J INNER JOIN Companies C ON J.CompanyID= C.CompanyID

WHERE J.Salary BETWEEN 20000 AND 50000;

7

SELECT J.JobTitle, C.CompanyName, A.ApplicationDate FROM Applications A

INNER JOIN Jobs J ON A.JobID = J.JobID INNER JOIN Companies C ON J.CompanyID = C.CompanyID WHERE A.ApplicantID=206;

8.

select AVG(Salary) As AverageSalary

From Jobs

where Salary>0;

9.

WITH JobCounts AS (

SELECT C.CompanyName, COUNT(J.JobID) AS JobCount

FROM Companies C

JOIN Jobs J ON C.CompanyID = J.CompanyID

GROUP BY C.CompanyName

)

SELECT CompanyName, JobCount

FROM JobCounts

WHERE JobCount = (SELECT MAX(JobCount) FROM JobCounts);

10.

SELECT ApplicantID, FirstName,LastName

FROM Applicants

WHERE ApplicantID IN (

SELECT AP.ApplicantID

FROM Applications AP

JOIN Jobs J ON AP.JobID = J.JobID

JOIN Companies C ON J.CompanyID = C.CompanyID

WHERE C.Location = 'CityX'

);

11.

Select DISTINCT JobTitle from Jobs WHERE Salary BETWEEN 20000 AND 50000;

12.

Select JobTitle from Jobs WHERE JobID NOT IN (

Select JobID fromApplications );

13.

ALTER Table Applicants

ADD YearsOfExperience INT;

Select A.FirstName,A.LastName, C.CompanyName, J.JobTitle from Applications AP

JOIN Applicants A ON AP.ApplicantID = A.ApplicantID JOIN Jobs J ON AP.JobID = J.JobID

JOIN Companies C ON J.CompanyID = C.CompanyID WHERE C.City = 'CityX'

AND A.YearsOfExperience >= 3;

14.

Select C.CompanyName, COUNT(J.JobID) AS JobCount from Companies C LEFT JOIN Jobs J ON C.CompanyID = J.CompanyID Group by C.CompanyName;

15.

Select A.ApplicantID, A.FirstName,A.LastName,C.CompanyName, J.JobTitle FROM

Applicants A LEFT JOIN Applications AP ON A.ApplicantID = AP.ApplicantID left join

Jobs J ON AP.JobID = J.JobID LEFT JOIN Companies C ON J.CompanyID = C.CompanyID;

16.

Select DISTINCT C.CompanyName FROM Jobs J JOIN Companies C ON J.CompanyID = C.CompanyID WHERE J.Salary > (SELECT AVG(Salary) FROM Jobs WHERE Salary > 0 );

17.

Alter Table Applicants

ADD City VARCHAR(100),

State VARCHAR(100);

Select FirstName, LastName, City + ', ' + State AS Location from Applicants;

18.

Select \* FROM Jobs WHERE JobTitle LIKE '%Developer%' OR JobTitle LIKE '%Engineer%';

19.

Select A.ApplicantID, A.FirstName, A.LastName, J.JobID, J.JobTitle FromApplicants A FULL OUTER JOIN Applications AP ON A.ApplicantID = AP.ApplicantI full outer join Jobs J ON AP.JobID = J.JobID;

20.

Select A.FirstName, A.LastName, A.YearsOfExperience, C.CompanyName, C.City AS CompanyCity FROM Applicants A CROSS JOIN Companies C WHERE C.City = 'Chennai' AND A.YearsOfExperience > 2;