**CareerHub SQL Coding Challenge Answers**

**1**.CREATE DATABASE IF NOT EXISTS CareerHub;

**2**.USE CareerHub;

CREATE TABLE IF NOT EXISTS companies (

CompanyID INT PRIMARY KEY AUTO\_INCREMENT,

CompanyName VARCHAR(255) NOT NULL,

Location VARCHAR(255) NOT NULL

);

CREATE TABLE IF NOT EXISTS jobs (

JobID INT PRIMARY KEY AUTO\_INCREMENT,

CompanyID INT,

JobTitle VARCHAR(255) NOT NULL,

JobDescription TEXT,

JobLocation VARCHAR(255),

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

JobType ENUM('Full-time', 'Part-time', 'Contract'),

PostedDate DATETIME DEFAULT CURRENT\_TIMESTAMP,

FOREIGN KEY (CompanyID) REFERENCES companies(CompanyID) ON DELETE CASCADE

);

CREATE TABLE IF NOT EXISTS applicants (

ApplicantID INT PRIMARY KEY AUTO\_INCREMENT,

FirstName VARCHAR(255) NOT NULL,

LastName VARCHAR(255) NOT NULL,

Email VARCHAR(255) UNIQUE NOT NULL,

Phone VARCHAR(20) UNIQUE NOT NULL,

Resume TEXT

);

CREATE TABLE IF NOT EXISTS applications (

ApplicationID INT PRIMARY KEY AUTO\_INCREMENT,

JobID INT,

ApplicantID INT,

ApplicationDate DATETIME DEFAULT CURRENT\_TIMESTAMP,

CoverLetter TEXT,

FOREIGN KEY (JobID) REFERENCES Jobs(JobID) ON DELETE CASCADE,

FOREIGN KEY (ApplicantID) REFERENCES applicants(ApplicantID) ON DELETE CASCADE

);

**3.** In the table companies there is a CompanyID is defined as Primary key

In the table Job there is a JobID is defined as Primary key

In the table applicants there is a ApplicantID is defined as Primary key

In the table applications there is a ApplicationID is defined as Primary key

In the table job there is a Comapany\_ID Foreign key is defined that is taken from company table and it is Primary key of the

company table and the constraint is ON DELETE CASCADE it means if the primary key record is deleted then delete the foreign key recode also.

FOREIGN KEY (CompanyID) REFERENCES companies(CompanyID) ON DELETE CASCADE

Also In the table applications there is a JobID and ApplicantID Foreign key is defined that is taken from the job table and applicant table also the constraint is ON DELETE CASCADE it means if the primary key record is deleted then delete the foreign key record also.

FOREIGN KEY (JobID) REFERENCES Jobs(JobID) ON DELETE CASCADE,

FOREIGN KEY (ApplicantID) REFERENCES applicants(ApplicantID) ON DELETE CASCADE

**4**. Ensured that script handles potential errors, such as

CREATE DATABASE IF NOT EXISTS CareerHub;

CREATE TABLE IF NOT EXISTS companies();

CREATE TABLE IF NOT EXISTS jobs ();

CREATE TABLE IF NOT EXISTS applicants ();

CREATE TABLE IF NOT EXISTS applications ();

**5**.SELECT COUNT(ApplicationID), JobTitle

FROM jobs j

LEFT OUTER join applications a

ON j.JobID = a.JobID

GROUP BY j.JobTitle;

**6**.SELECT j.JobTitle, c.CompanyName, j.Location, j.Salary

FROM jobs j

LEFT OUTER JOIN companies c

ON j.CompanyID = c.CompanyID

WHERE j.salary BETWEEN 700000 AND 900000;

**7**.SELECT j.JobTitle, c.CompanyName, a.ApplicationDate

FROM applications a

JOIN jobs j

ON j.JobID = a.JobID

JOIN companies c

ON c.CompanyID = j.CompanyID

WHERE a.ApplicationID = 1;

**8**. SELECT AVG(Salary)

FROM jobs

WHERE salary > 0;

**9**.SELECT CompanyName, Count(JobID)

FROM companies c

JOIN jobs j

ON c.CompanyID = j.CompanyID

GROUP BY CompanyName;

**10**.SELECT a.ApplicantID, a.FirstName, a.LastName, a.Email

FROM applicants a

JOIN applications ap ON a.ApplicantID = ap.ApplicantID

JOIN jobs j ON j.JobID = ap.JobID

JOIN companies c ON c.CompanyID = j.CompanyID

WHERE c.Location = 'Mumbai';

**11**.SELECT DISTINCT JobTitle, Salary

FROM jobs

WHERE Salary BETWEEN 600000 AND 800000;

**12**. SELECT j.JobTitle

FROM Jobs j

JOIN Applications a ON j.JobID = a.JobID

WHERE a.ApplicationID IS NULL;

**13**.SELECT a.ApplicantID, a.FirstName, a.LastName, a.Email, c.CompanyName, j.JobTitle

FROM applicants a

JOIN applications ap ON ap.ApplicantID = a.ApplicantID

JOIN jobs j ON ap.JobID = j.JobID

JOIN companies c ON j.CompanyID = c.CompanyID;

**15**. SELECT a.ApplicantID, a.FirstName, a.LastName, a.Email, c.CompanyName, j.JobTitle

FROM applicants a

LEFT JOIN applications ap ON ap.ApplicantID = a.ApplicantID

LEFT JOIN jobs j ON ap.JobID = j.JobID

LEFT JOIN companies c ON j.CompanyID = c.CompanyID;

**16**.SELECT DISTINCT c.CompanyName, j.salary

FROM Companies c

JOIN Jobs j ON c.CompanyID = j.CompanyID

WHERE j.Salary > (SELECT AVG(Salary) FROM Jobs);

**17**.SELECT CONCAT(Firstname, ' ', LastName) AS FullName

FROM Applicants;

**18**. SELECT JobTitle, JobDescription,JobLocation, Salary

FROM jobs

WHERE JobTitle LIKE '%Engineer%' OR JobTitle LIKE '%Developer%';

**19**.SELECT a.FirstName, a.LastName, j.JobTitle

FROM Applicants a

LEFT JOIN Applications ap ON a.ApplicantID = ap.ApplicantID

LEFT JOIN Jobs j ON ap.JobID = j.JobID;

**20**.SELECT a.FirstName, a.LastName, c.CompanyName

FROM Applicants a, Companies c

WHERE c.Location = 'Chennai';