

CAREERHUB, THE JOB BOARD

Problem Statement:

Create SQL Schema from the application, use the class attributes for table column names.

SQL Schema:

Table: Companies

Attributes:

- CompanyID (Primary Key, int): Unique identifier for each company.
- CompanyName (string): The name of the hiring company.
- Location (string): The location of the company.

Table: Jobs

Attributes:

- JobID (Primary Key, int): Unique identifier for each job listing.
- CompanyID (Foreign Key, int): References the CompanyID of the hiring company.
- JobTitle (string): The title of the job.
- JobDescription (text): A detailed description of the job.
- JobLocation (string): The location where the job is based.
- Salary (decimal): The salary offered for the job.
- JobType (string): Type of job (e.g., Full-time, Part-time, Contract).
- PostedDate (datetime): Date and time when the job was posted.

Table: Applicants

Attributes:

- ApplicantID (Primary Key, int): Unique identifier for each applicant.
- FirstName (string): The first name of the applicant.
- LastName (string): The last name of the applicant.
- Email (string): The email address of the applicant.
- Phone (string): The phone number of the applicant.
- Resume (text): The applicant's resume or CV (text or file reference).

Table: Applications

Attributes:

- ApplicationID (Primary Key, int): Unique identifier for each job application.
- JobID (Foreign Key, int): References the JobID of the job listing.
- ApplicantID (Foreign Key, int): References the ApplicantID of the applicant.
- ApplicationDate (datetime): Date and time when the application was submitted.
- CoverLetter (text): The applicant's cover letter for the specific job.

Tasks:

1. Provide a SQL script that initializes the database for the Job Board scenario “CareerHub”.

Create database careerhub.

Use careerhub.

2. Create tables for Companies, Jobs, Applicants and Applications.

Companies Table:

create table if not exists companies (CompanyID int primary key auto_increment, CompanyName varchar(225) not null, Location varchar(225) not null);

```
mysql> create table if not exists companies (CompanyID int primary key auto_increment, CompanyName varchar(225) not null, Location varchar(225) not null);
Query OK, 0 rows affected (0.03 sec)

mysql> desc companies;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+-----+
| CompanyID  | int           | NO   | PRI | NULL    | auto_increment |
| CompanyName | varchar(225)  | NO   |     | NULL    |                |
| Location    | varchar(225)  | NO   |     | NULL    |                |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

Inserting values into the companies table.

insert into companies values

- (1, 'Microsoft', 'Redmond'),
- (2, 'Google', 'Mountain View'),
- (3, 'Apple Inc.', 'Cupertino'),
- (4, 'Amazon', 'Seattle'),
- (5, 'Facebook', 'Menlo Park'),
- (6, 'Adobe', 'San Jose'),
- (7, 'Oracle', 'Redwood City'),
- (8, 'IBM', 'Armonk'),
- (9, 'Intel', 'Santa Clara'),
- (10, 'Salesforce', 'San Francisco');

```
mysql> insert into companies values
-> (1, 'Microsoft', 'Redmond'),
-> (2, 'Google', 'Mountain View'),
-> (3, 'Apple Inc.', 'Cupertino'),
-> (4, 'Amazon', 'Seattle'),
-> (5, 'Facebook', 'Menlo Park'),
-> (6, 'Adobe', 'San Jose'),
-> (7, 'Oracle', 'Redwood City'),
-> (8, 'IBM', 'Armonk'),
-> (9, 'Intel', 'Santa Clara'),
-> (10, 'Salesforce', 'San Francisco');
```

Query OK, 10 rows affected (0.01 sec)

Records: 10 Duplicates: 0 Warnings: 0

```
mysql> select * from companies;
```

CompanyID	CompanyName	Location
1	Microsoft	Redmond
2	Google	Mountain View
3	Apple Inc.	Cupertino
4	Amazon	Seattle
5	Facebook	Menlo Park
6	Adobe	San Jose
7	Oracle	Redwood City
8	IBM	Armonk
9	Intel	Santa Clara
10	Salesforce	San Francisco

10 rows in set (0.00 sec)

Jobs Table:

CREATE TABLE IF NOT EXISTS Jobs (

JobID INT PRIMARY KEY AUTO_INCREMENT,

CompanyID INT,

JobTitle VARCHAR(100) NOT NULL,

JobDescription TEXT,

JobLocation VARCHAR(100),

Salary DECIMAL(10, 2),

JobType VARCHAR(50),

PostedDate TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
FOREIGN KEY (CompanyID) REFERENCES Companies(CompanyID) on delete
cascade on update cascade
);

```
mysql> CREATE TABLE IF NOT EXISTS Jobs (  
-> JobID INT PRIMARY KEY AUTO_INCREMENT,  
-> CompanyID INT,  
-> JobTitle VARCHAR(100) NOT NULL,  
-> JobDescription TEXT,  
-> JobLocation VARCHAR(100),  
-> Salary DECIMAL(10, 2),  
-> JobType VARCHAR(50),  
-> PostedDate TIMESTAMP DEFAULT CURRENT_TIMESTAMP,  
-> FOREIGN KEY (CompanyID) REFERENCES Companies(CompanyID) on delete cascade on update  
cascade  
-> );  
Query OK, 0 rows affected (0.03 sec)
```

```
mysql> desc jobs;  
+-----+-----+-----+-----+-----+-----+-----+  
| Field          | Type          | Null | Key | Default          | Extra          |  
+-----+-----+-----+-----+-----+-----+-----+  
| JobID          | int           | NO   | PRI | NULL             | auto_increment|  
| CompanyID      | int           | YES  | MUL | NULL             |               |  
| JobTitle        | varchar(100)  | NO   |     | NULL             |               |  
| JobDescription  | text          | YES  |     | NULL             |               |  
| JobLocation     | varchar(100)  | YES  |     | NULL             |               |  
| Salary          | decimal(10,2) | YES  |     | NULL             |               |  
| JobType         | varchar(50)   | YES  |     | NULL             |               |  
| PostedDate      | timestamp     | YES  |     | CURRENT_TIMESTAMP| DEFAULT_GENERATED|  
+-----+-----+-----+-----+-----+-----+-----+  
8 rows in set (0.00 sec)
```

Inserting into Jobs table:

INSERT INTO Jobs (CompanyID, JobTitle, JobDescription, JobLocation, Salary, JobType, PostedDate)
VALUES

- (1, 'Software Developer', 'Develop and maintain software applications for various platforms.', 'San Francisco', 110000.00, 'Full-time', '2024-04-19 08:00:00'),
- (2, 'Data Analyst', 'Analyze large datasets to extract meaningful insights for business decisions.', 'New York', 95000.00, 'Full-time', '2024-04-19 08:30:00'),
- (3, 'Marketing Manager', 'Create and execute marketing strategies to promote company products.', 'Los Angeles', 105000.00, 'Full-time', '2024-04-19 09:00:00'),
- (4, 'Graphic Designer', 'Design visual elements for print and digital media.', 'Chicago', 80000.00, 'Contract', '2024-04-19 09:30:00'),
- (5, 'Project Manager', 'Coordinate project activities and ensure timely delivery within budget.', 'Seattle', 120000.00, 'Full-time', '2024-04-19 10:00:00'),
- (6, 'Customer Support Representative', 'Provide assistance to customers via phone, email, and chat.', 'Austin', 75000.00, 'Part-time', '2024-04-19 10:30:00'),
- (7, 'Software Engineer Intern', 'Assist in developing and testing software applications under supervision.', 'San Jose', 60000.00, 'Internship', '2024-04-19 11:00:00'),
- (8, 'Human Resources Specialist', 'Handle recruitment, employee relations, and HR policies.', 'London', 90000.00, 'Full-time', '2024-04-19 11:30:00'),

(9, 'Financial Analyst', 'Analyze financial data and prepare reports for decision-making.', 'Toronto', 100000.00, 'Full-time', '2024-04-19 12:00:00'),
(10, 'Content Writer', 'Create engaging content for websites, blogs, and social media platforms.', 'Sydney', 85000.00, 'Contract', '2024-04-19 12:30:00');

```
mysql> -- Insert data into Jobs table
mysql> INSERT INTO Jobs (CompanyID, JobTitle, JobDescription, JobLocation, Salary, JobType, PostedDate) VALUES
-> (1, 'Software Developer', 'Develop and maintain software applications for various platforms.', 'San Francisco', 110000.00, 'Full-time', '2024-04-19 08:00:00'),
-> (2, 'Data Analyst', 'Analyze large datasets to extract meaningful insights for business decisions.', 'New York', 95000.00, 'Full-time', '2024-04-19 08:30:00'),
-> (3, 'Marketing Manager', 'Create and execute marketing strategies to promote company products.', 'Los Angeles', 105000.00, 'Full-time', '2024-04-19 09:00:00'),
-> (4, 'Graphic Designer', 'Design visual elements for print and digital media.', 'Chicago', 80000.00, 'Contract', '2024-04-19 09:30:00'),
-> (5, 'Project Manager', 'Coordinate project activities and ensure timely delivery within budget.', 'Seattle', 120000.00, 'Full-time', '2024-04-19 10:00:00'),
-> (6, 'Customer Support Representative', 'Provide assistance to customers via phone, email, and chat.', 'Austin', 75000.00, 'Part-time', '2024-04-19 10:30:00'),
-> (7, 'Software Engineer Intern', 'Assist in developing and testing software applications under supervision.', 'San Jose', 60000.00, 'Internship', '2024-04-19 11:00:00'),
-> (8, 'Human Resources Specialist', 'Handle recruitment, employee relations, and HR policies.', 'London', 90000.00, 'Full-time', '2024-04-19 11:30:00'),
-> (9, 'Financial Analyst', 'Analyze financial data and prepare reports for decision-making.', 'Toronto', 100000.00, 'Full-time', '2024-04-19 12:00:00'),
-> (10, 'Content Writer', 'Create engaging content for websites, blogs, and social media platforms.', 'Sydney', 85000.00, 'Contract', '2024-04-19 12:30:00');
Query OK, 10 rows affected (0.00 sec)
Records: 10 Duplicates: 0 Warnings: 0
```

```
mysql> select * from jobs;
```

JobID	CompanyID	JobTitle	JobDescription	JobLocation	Salary	JobType	PostedDate
1	1	Software Developer	Develop and maintain software applications for various platforms.	San Francisco	110000.00	Full-time	2024-04-19 08:00:00
2	2	Data Analyst	Analyze large datasets to extract meaningful insights for business decisions.	New York	95000.00	Full-time	2024-04-19 08:30:00
3	3	Marketing Manager	Create and execute marketing strategies to promote company products.	Los Angeles	105000.00	Full-time	2024-04-19 09:00:00
4	4	Graphic Designer	Design visual elements for print and digital media.	Chicago	80000.00	Contract	2024-04-19 09:30:00
5	5	Project Manager	Coordinate project activities and ensure timely delivery within budget.	Seattle	120000.00	Full-time	2024-04-19 10:00:00
6	6	Customer Support Representative	Provide assistance to customers via phone, email, and chat.	Austin	75000.00	Part-time	2024-04-19 10:30:00
7	7	Software Engineer Intern	Assist in developing and testing software applications under supervision.	San Jose	60000.00	Internship	2024-04-19 11:00:00
8	8	Human Resources Specialist	Handle recruitment, employee relations, and HR policies.	London	90000.00	Full-time	2024-04-19 11:30:00
9	9	Financial Analyst	Analyze financial data and prepare reports for decision-making.	Toronto	100000.00	Full-time	2024-04-19 12:00:00
10	10	Content Writer	Create engaging content for websites, blogs, and social media platforms.	Sydney	85000.00	Contract	2024-04-19 12:30:00

10 rows in set (0.00 sec)

Applicants Table:

```
CREATE TABLE IF NOT EXISTS Applicants (
    ApplicantID INT PRIMARY KEY AUTO_INCREMENT,
    FirstName VARCHAR (50) NOT NULL,
    LastName VARCHAR (50) NOT NULL,
    Email VARCHAR (100) NOT NULL,
    Phone VARCHAR (20) NOT NULL,
    Resume TEXT
);
```

```
mysql> CREATE TABLE IF NOT EXISTS Applicants (
->     ApplicantID INT PRIMARY KEY AUTO_INCREMENT,
->     FirstName VARCHAR(50) NOT NULL,
->     LastName VARCHAR(50) NOT NULL,
->     Email VARCHAR(100) NOT NULL,
->     Phone VARCHAR(20) NOT NULL,
->     Resume TEXT
-> );
```

Query OK, 0 rows affected (0.02 sec)

```
mysql> DESC APPLICANTS;
```

Field	Type	Null	Key	Default	Extra
ApplicantID	int	NO	PRI	NULL	auto_increment
FirstName	varchar(50)	NO		NULL	
LastName	varchar(50)	NO		NULL	
Email	varchar(100)	NO		NULL	
Phone	varchar(20)	NO		NULL	
Resume	text	YES		NULL	

6 rows in set (0.00 sec)

Inserting into applicants table.

INSERT INTO Applicants VALUES

(1, 'John', 'Doe', 'john@example.com', '+1234567890', 'John Doe is a highly motivated individual with extensive experience in software development. He has a strong background in programming languages such as Java, Python, and JavaScript. John holds a Bachelor\'s degree in Computer Science from XYZ University and has worked on various projects, including web applications, mobile apps, and enterprise software solutions.'),

(2, 'Jane', 'Smith', 'jane@example.com', '+1987654321', 'Jane Smith is a detail-oriented data analyst with expertise in data visualization and statistical analysis. She has a Master\'s degree in Statistics and has worked with large datasets using tools such as SQL, Python, and Tableau. Jane is passionate about uncovering insights from data to drive business decisions and improve processes.'),

(3, 'Michael', 'Johnson', 'michael@example.com', '+1122334455', 'Michael Johnson is a results-driven marketing professional with a proven track record of executing successful marketing campaigns. He has experience in digital marketing, social media management, and content creation. Michael is skilled in

market research, campaign analysis, and strategy development, and he holds a Bachelor's degree in Marketing.'),

(4, 'Emily', 'Brown', 'emily@example.com', '+1555666777', 'Emily Brown is a creative graphic designer with a keen eye for detail and aesthetics. She specializes in branding, logo design, and layout composition across print and digital media. Emily is proficient in Adobe Creative Suite and has a Bachelor's degree in Graphic Design. She has a passion for translating ideas into visually appealing designs.'),

(5, 'Daniel', 'Martinez', 'daniel@example.com', '+1443322111', 'Daniel Martinez is a dedicated project manager with experience leading cross-functional teams to deliver projects on time and within budget. He is skilled in project planning, resource allocation, and risk management. Daniel holds a Project Management Professional (PMP) certification and has successfully managed projects in various industries.'),

(6, 'Sophia', 'Taylor', 'sophia@example.com', '+1666555444', 'Sophia Taylor is a customer-focused professional with a background in sales and customer support. She excels in building rapport with customers, resolving issues efficiently, and providing exceptional service. Sophia has strong communication skills and a Bachelor's degree in Business Administration.'),

(7, 'Christopher', 'Anderson', 'chris@example.com', '+1888777666', 'Christopher Anderson is a software engineering intern eager to gain hands-on experience in developing software applications. He is currently pursuing a Bachelor's degree in Computer Science and has completed coursework in algorithms, data structures, and software development. Christopher is enthusiastic about contributing to innovative projects and learning new technologies.'),

(8, 'Olivia', 'Wilson', 'olivia@example.com', '+1999888777', 'Olivia Wilson is an HR specialist with expertise in recruitment, employee relations, and HR policies. She has experience in conducting interviews, onboarding new employees, and managing performance evaluations. Olivia holds a Bachelor's degree in Human Resources Management and is committed to creating a positive work environment.'),

(9, 'William', 'Thompson', 'will@example.com', '+1777666555', 'William Thompson is a financial analyst with a strong analytical mindset and attention to detail. He is skilled in financial modeling, forecasting, and budgeting. William holds a Master's degree in Finance and has experience working in the banking and investment industry. He is proficient in Excel, SQL, and financial analysis tools.'),

(10, 'Ava', 'Clark', 'ava@example.com', '+1888999000', 'Ava Clark is a talented content writer with a passion for storytelling and digital marketing. She has experience creating engaging content for websites, blogs, and social media platforms. Ava is skilled in SEO optimization, content strategy, and content distribution. She holds a Bachelor's degree in English Literature and has a knack for crafting compelling narratives.');

```
mysql> INSERT INTO Applicants VALUES
-> (1, 'John', 'Doe', 'john@example.com', '+1234567890', 'John Doe is a highly motivated individual with extensive experience in software development. He has a strong background in programming languages such as Java, Python, and JavaScript. John holds a Bachelor's degree in Computer Science from XYZ University and has worked on various projects, including web applications, mobile apps, and enterprise software solutions. '),
-> (2, 'Jane', 'Smith', 'jane@example.com', '+1987654321', 'Jane Smith is a detail-oriented data analyst with expertise in data visualization and statistical analysis. She has a Master's degree in Statistics and has worked with large datasets using tools such as SQL, Python, and Tableau. Jane is passionate about uncovering insights from data to drive business decisions and improve processes. '),
-> (3, 'Michael', 'Johnson', 'michael@example.com', '+1122334455', 'Michael Johnson is a results-driven marketing professional with a proven track record of executing successful marketing campaigns. He has experience in digital marketing, social media management, and content creation. Michael is skilled in market research, campaign analysis, and strategy development, and he holds a Bachelor's degree in Marketing. '),
-> (4, 'Emily', 'Brown', 'emily@example.com', '+1555666777', 'Emily Brown is a creative graphic designer with a keen eye for detail and aesthetics. She specializes in branding, logo design, and layout composition across print and digital media. Emily is proficient in Adobe Creative Suite and has a Bachelor's degree in Graphic Design. She has a passion for translating ideas into visually appealing designs. '),
-> (5, 'Daniel', 'Martinez', 'daniel@example.com', '+1443322111', 'Daniel Martinez is a dedicated project manager with experience leading cross-functional teams to deliver projects on time and within budget. He is skilled in project planning, resource allocation, and risk management. Daniel holds a Project Management Professional (PMP) certification and has successfully managed projects in various industries. '),
-> (6, 'Sophia', 'Taylor', 'sophia@example.com', '+1666555444', 'Sophia Taylor is a customer-focused professional with a background in sales and customer support. She excels in building rapport with customers, resolving issues efficiently, and providing exceptional service. Sophia has strong communication skills and a Bachelor's degree in Business Administration. '),
-> (7, 'Christopher', 'Anderson', 'chris@example.com', '+1888777666', 'Christopher Anderson is a software engineering intern eager to gain hands-on experience in developing software applications. He is currently pursuing a Bachelor's degree in Computer Science and has completed coursework in algorithms, data structures, and software development. Christopher is enthusiastic about contributing to innovative projects and learning new technologies. '),
-> (8, 'Olivia', 'Wilson', 'olivia@example.com', '+1999888777', 'Olivia Wilson is an HR specialist with expertise in recruitment, employee relations, and HR policies. She has experience in conducting interviews, onboarding new employees, and managing performance evaluations. Olivia holds a Bachelor's degree in Human Resources Management and is committed to creating a positive work environment. '),
-> (9, 'William', 'Thompson', 'will@example.com', '+1777666555', 'William Thompson is a financial analyst with a strong analytical mindset and attention to detail. He is skilled in financial modeling, forecasting, and budgeting. William holds a Master's degree in Finance and has experience working in the banking and investment industry. He is proficient in Excel, SQL, and financial analysis tools. '),
-> (10, 'Ava', 'Clark', 'ava@example.com', '+1888999000', 'Ava Clark is a talented content writer with a passion for storytelling and digital marketing. She has experience creating engaging content for websites, blogs, and social media platforms. Ava is skilled in SEO optimization, content strategy, and content distribution. She holds a Bachelor's degree in English Literature and has a knack for crafting compelling narratives. ');
Query OK, 10 rows affected (0.03 sec)
Records: 10 Duplicates: 0 Warnings: 0
```

```
mysql> select * from applicants;
+-----+-----+-----+-----+-----+-----+
| ApplicantID | FirstName | LastName | Email | Phone | Resume |
+-----+-----+-----+-----+-----+-----+
| 1 | John | Doe | john@example.com | +1234567890 | John Doe is a highly motivated individual with extensive experience in software development. He has a strong background in programming languages such as Java, Python, and JavaScript. John holds a Bachelor's degree in Computer Science from XYZ University and has worked on various projects, including web applications, mobile apps, and enterprise software solutions. |
| 2 | Jane | Smith | jane@example.com | +1987654321 | Jane Smith is a detail-oriented data analyst with expertise in data visualization and statistical analysis. She has a Master's degree in Statistics and has worked with large datasets using tools such as SQL, Python, and Tableau. Jane is passionate about uncovering insights from data to drive business decisions and improve processes. |
| 3 | Michael | Johnson | michael@example.com | +1122334455 | Michael Johnson is a results-driven marketing professional with a proven track record of executing successful marketing campaigns. He has experience in digital marketing, social media management, and content creation. Michael is skilled in market research, campaign analysis, and strategy development, and he holds a Bachelor's degree in Marketing. |
| 4 | Emily | Brown | emily@example.com | +1555666777 | Emily Brown is a creative graphic designer with a keen eye for detail and aesthetics. She specializes in branding, logo design, and layout composition across print and digital media. Emily is proficient in Adobe Creative Suite and has a Bachelor's degree in Graphic Design. She has a passion for translating ideas into visually appealing designs. |
| 5 | Daniel | Martinez | daniel@example.com | +1443322111 | Daniel Martinez is a dedicated project manager with experience leading cross-functional teams to deliver projects on time and within budget. He is skilled in project planning, resource allocation, and risk management. Daniel holds a Project Management Professional (PMP) certification and has successfully managed projects in various industries. |
| 6 | Sophia | Taylor | sophia@example.com | +1666555444 | Sophia Taylor is a customer-focused professional with a background in sales and customer support. She excels in building rapport with customers, resolving issues efficiently, and providing exceptional service. Sophia has strong communication skills and a Bachelor's degree in Business Administration. |
| 7 | Christopher | Anderson | chris@example.com | +1888777666 | Christopher Anderson is a software engineering intern eager to gain hands-on experience in developing software applications. He is currently pursuing a Bachelor's degree in Computer Science and has completed coursework in algorithms, data structures, and software development. Christopher is enthusiastic about contributing to innovative projects and learning new technologies. |
| 8 | Olivia | Wilson | olivia@example.com | +1999888777 | Olivia Wilson is an HR specialist with expertise in recruitment, employee relations, and HR policies. She has experience in conducting interviews, onboarding new employees, and managing performance evaluations. Olivia holds a Bachelor's degree in Human Resources Management and is committed to creating a positive work environment. |
| 9 | William | Thompson | will@example.com | +1777666555 | William Thompson is a financial analyst with a strong analytical mindset and attention to detail. He is skilled in financial modeling, forecasting, and budgeting. William holds a Master's degree in Finance and has experience working in the banking and investment industry. He is proficient in Excel, SQL, and financial analysis tools. |
| 10 | Ava | Clark | ava@example.com | +1888999000 | Ava Clark is a talented content writer with a passion for storytelling and digital marketing. She has experience creating engaging content for websites, blogs, and social media platforms. Ava is skilled in SEO optimization, content strategy, and content distribution. She holds a Bachelor's degree in English Literature and has a knack for crafting compelling narratives. |
+-----+-----+-----+-----+-----+-----+
10 rows in set (0.01 sec)
```


Adding Experience column:

alter table applicants add (experience int(20));

update applicants set experience=1 where applicantid in(1,5,10);

update applicants set experience=5 where applicantid in(2,6,9);

update applicants set experience=3 where applicantid in(3,4,7);

update applicants set experience=2 where applicantid in(8);

```
mysql> alter table applicants add (experience int(20));
Query OK, 0 rows affected, 1 warning (0.07 sec)
Records: 0 Duplicates: 0 Warnings: 1

mysql> desc applicants;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra           |
+-----+-----+-----+-----+-----+-----+
| ApplicantID | int           | NO   | PRI | NULL    | auto_increment |
| FirstName   | varchar(50)   | NO   |     | NULL    |                 |
| LastName    | varchar(50)   | NO   |     | NULL    |                 |
| Email       | varchar(100)  | NO   |     | NULL    |                 |
| Phone       | varchar(20)   | NO   |     | NULL    |                 |
| Resume      | text          | YES  |     | NULL    |                 |
| experience  | int           | YES  |     | NULL    |                 |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.01 sec)

mysql> update applicants set experience=1 where applicantid in(1,5,10);
Query OK, 3 rows affected (0.01 sec)
Rows matched: 3 Changed: 3 Warnings: 0

mysql> update applicants set experience=5 where applicantid in(2,6,9);
Query OK, 3 rows affected (0.01 sec)
Rows matched: 3 Changed: 3 Warnings: 0

mysql> update applicants set experience=3 where applicantid in(3,4,7);
Query OK, 3 rows affected (0.00 sec)
Rows matched: 3 Changed: 3 Warnings: 0

mysql> update applicants set experience=2 where applicantid in(8);
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

Adding city, state column in applicants table:

```
mysql> alter table applicants add (city varchar(50),state varchar(50));
Query OK, 0 rows affected (0.03 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> desc applicants;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra           |
+-----+-----+-----+-----+-----+-----+
| ApplicantID | int           | NO   | PRI | NULL    | auto_increment |
| FirstName   | varchar(50)   | NO   |     | NULL    |                 |
| LastName    | varchar(50)   | NO   |     | NULL    |                 |
| Email       | varchar(100)  | NO   |     | NULL    |                 |
| Phone       | varchar(20)   | NO   |     | NULL    |                 |
| Resume      | text          | YES  |     | NULL    |                 |
| experience  | int           | YES  |     | NULL    |                 |
| city        | varchar(50)   | YES  |     | NULL    |                 |
| state       | varchar(50)   | YES  |     | NULL    |                 |
+-----+-----+-----+-----+-----+-----+
9 rows in set (0.00 sec)
```

```
alter table applicants add (city varchar(50),state varchar(50));  
update applicants set city='Narayanapuram' where applicantid in(1,3,5);  
update applicants set city='Tadepalligudem' where applicantid in(2,4,6);  
update applicants set city='Pothavaram' where applicantid in(7,9);  
update applicants set city='Kodamanchali' where applicantid in(8,10);
```

```
update applicants set state='Andhra Pradesh' where applicantid in(1,3,5);  
update applicants set state='Telangana' where applicantid in(2,4,6);  
update applicants set state='Tamil Nadu' where applicantid in(7,9);  
update applicants set state='Karnataka' where applicantid in(8,10);
```

```
mysql> update applicants set city='Narayanapuram' where applicantid in(1,3,5);  
Query OK, 0 rows affected (0.00 sec)  
Rows matched: 3  Changed: 0  Warnings: 0  
  
mysql> update applicants set city='Tadepalligudem' where applicantid in(2,4,6);  
Query OK, 3 rows affected (0.01 sec)  
Rows matched: 3  Changed: 3  Warnings: 0  
  
mysql> update applicants set city='Pothavaram' where applicantid in(7,9);  
Query OK, 2 rows affected (0.00 sec)  
Rows matched: 2  Changed: 2  Warnings: 0  
  
mysql> update applicants set city='Kodamanchali' where applicantid n(8,10);  
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that  
mysql> update applicants set city='Kodamanchali' where applicantid in(8,10);  
Query OK, 0 rows affected (0.00 sec)  
Rows matched: 2  Changed: 0  Warnings: 0  
  
mysql> update applicants set state='Andhra Pradesh' where applicantid in(1,3,5);  
Query OK, 0 rows affected (0.00 sec)  
Rows matched: 3  Changed: 0  Warnings: 0  
  
mysql> update applicants set state='Telangana' where applicantid in(2,4,6);  
Query OK, 3 rows affected (0.00 sec)  
Rows matched: 3  Changed: 3  Warnings: 0  
  
mysql> update applicants set state='Tamil Nadu' where applicantid in(7,9);  
Query OK, 2 rows affected (0.00 sec)  
Rows matched: 2  Changed: 2  Warnings: 0  
  
mysql> update applicants set state='Karnataka' where applicantid in(8,10);  
Query OK, 2 rows affected (0.00 sec)  
Rows matched: 2  Changed: 2  Warnings: 0
```

```
mysql> select * from applicants;
+-----+-----+-----+-----+-----+-----+
| ApplicantID | FirstName | LastName | Email | Phone | Resume |
+-----+-----+-----+-----+-----+-----+
| 1 | John | Doe | john@example.com | +1234567890 | John Doe is a highly motivated individual with extensive experience in software development. He has a strong background in programming languages such as Java, Python, and JavaScript. John holds a Bachelor's degree in Computer Science from XYZ University and has worked on various projects, including web applications, mobile apps, and enterprise software solutions. |
| 2 | Jane | Smith | jane@example.com | +1987654321 | Jane Smith is a detail-oriented data analyst with expertise in data visualization and statistical analysis. She has a Master's degree in Statistics and has worked with large datasets using tools such as SQL, Python, and Tableau. Jane is passionate about uncovering insights from data to drive business decisions and improve processes. |
| 3 | Michael | Johnson | michael@example.com | +1122334455 | Michael Johnson is a results-driven marketing professional with a proven track record of executing successful marketing campaigns. He has experience in digital marketing, social media management, and content creation. Michael is skilled in market research, campaign analysis, and strategy development, and he holds a Bachelor's degree in Marketing. |
| 4 | Emily | Brown | emily@example.com | +1555666777 | Emily Brown is a creative graphic designer with a keen eye for detail and aesthetics. She specializes in branding, logo design, and layout composition across print and digital media. Emily is proficient in Adobe Creative Suite and has a Bachelor's degree in Graphic Design. She has a passion for translating ideas into visually appealing designs. |
| 5 | Daniel | Martinez | daniel@example.com | +1443322111 | Daniel Martinez is a dedicated project manager with experience leading cross-functional teams to deliver projects on time and within budget. He is skilled in project planning, resource allocation, and risk management. Daniel holds a Project Management Professional (PMP) certification and has successfully managed projects in various industries. |
| 6 | Sophia | Taylor | sophia@example.com | +1666555444 | Sophia Taylor is a customer-focused professional with a background in sales and customer support. She excels in building rapport with customers, resolving issues efficiently, and providing exceptional service. Sophia has strong communication skills and a Bachelor's degree in Business Administration. |
| 7 | Christopher | Anderson | chris@example.com | +1888777666 | Christopher Anderson is a software engineering intern eager to gain hands-on experience in developing software applications. He is currently pursuing a Bachelor's degree in Computer Science and has completed coursework in algorithms, data structures, and software development. Christopher is enthusiastic about contributing to innovative projects and learning new technologies. |
| 8 | Olivia | Wilson | olivia@example.com | +1999888777 | Olivia Wilson is an HR specialist with expertise in recruitment, employee relations, and HR policies. She has experience in conducting interviews, onboarding new employees, and managing performance evaluations. Olivia holds a Bachelor's degree in Human Resources Management and is committed to creating a positive work environment. |
| 9 | William | Thompson | will@example.com | +1777666555 | William Thompson is a financial analyst with a strong analytical mindset and attention to detail. He is skilled in financial modeling, forecasting, and budgeting. William holds a Master's degree in Finance and has experience working in the banking and investment industry. He is proficient in Excel, SQL, and financial analysis tools. |
| 10 | Ava | Clark | ava@example.com | +1888999000 | Ava Clark is a talented content writer with a passion for storytelling and digital marketing. She has experience creating engaging content for websites, blogs, and social media platforms. Ava is skilled in SEO optimization, content strategy, and content distribution. She holds a Bachelor's degree in English Literature and has a knack for crafting compelling narratives. |
+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)
```

Applications Table:

-- Create Applications table if it doesn't exist

CREATE TABLE IF NOT EXISTS Applications (

ApplicationID INT PRIMARY KEY AUTO_INCREMENT,

JobID INT,

ApplicantID INT,

ApplicationDate TIMESTAMP DEFAULT CURRENT_TIMESTAMP,

CoverLetter TEXT,

FOREIGN KEY (JobID) REFERENCES Jobs(JobID) on delete cascade on update cascade,

FOREIGN KEY (ApplicantID) REFERENCES Applicants(ApplicantID) on delete cascade on update cascade

);

```
mysql> CREATE TABLE IF NOT EXISTS Applications (
->   ApplicationID INT PRIMARY KEY AUTO_INCREMENT,
->   JobID INT,
->   ApplicantID INT,
->   ApplicationDate TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
->   CoverLetter TEXT,
->   FOREIGN KEY (JobID) REFERENCES Jobs(JobID) on delete cascade on update cascade,
->   FOREIGN KEY (ApplicantID) REFERENCES Applicants(ApplicantID) on delete cascade on
update cascade
-> );
Query OK, 0 rows affected (0.03 sec)

mysql> desc applications;
+-----+-----+-----+-----+-----+-----+
| Field          | Type      | Null | Key | Default      | Extra           |
+-----+-----+-----+-----+-----+-----+
| ApplicationID  | int       | NO   | PRI | NULL         | auto_increment |
| JobID          | int       | YES  | MUL | NULL         |                 |
| ApplicantID    | int       | YES  | MUL | NULL         |                 |
| ApplicationDate | timestamp | YES  |     | CURRENT_TIMESTAMP | DEFAULT_GENERATED |
| CoverLetter    | text      | YES  |     | NULL         |                 |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

INSERT INTO Applications VALUES

(1,1, 1, '2024-04-19 08:00:00', 'I am excited to apply for the Software Engineer position at your esteemed organization. With a strong background in software development and a passion for innovation, I am confident in my ability to contribute effectively to your team. Please find my resume attached for your review. Thank you for considering my application.'),

(2,2, 2, '2024-04-20 08:30:00', 'I am writing to express my interest in the Data Analyst position at your company. With expertise in data analysis and visualization, I am eager to leverage my skills to extract valuable insights from data. Please find my resume attached for your review. Thank you for considering my application.'),

(3,3, 3, '2024-04-09 09:00:00', 'I am enthusiastic about the Marketing Manager role at your organization. With a track record of executing successful marketing campaigns, I am excited to bring my creativity and strategic thinking to your team. Please find my resume attached for your consideration.'),

(4,4, 4, '2024-04-29 09:30:00', 'I am interested in the Graphic Designer position and thrilled about the opportunity to contribute my design skills to your team. With a keen eye for aesthetics and attention to detail, I am confident in my ability to create visually appealing graphics. Please find my resume attached for your review.'),

(5,5, 5, '2024-04-15 10:00:00', 'I am applying for the Project Manager position at your company. With experience in leading cross-functional teams and delivering projects on time and within budget, I am eager to bring my project management skills to your organization. Please find my resume attached for your consideration.'),

(6,6, 6, '2024-04-10 10:30:00', 'I am excited to apply for the Customer Support Representative position at your organization. With a passion for providing excellent customer service and resolving issues efficiently, I am confident in my ability to contribute positively to your team. Please find my resume attached for your review.'),

(7,7, 7, '2024-04-11 11:00:00', 'I am writing to express my interest in the Software Engineer Intern position at your company. As a recent graduate in computer science, I am eager to gain practical experience in

software development and contribute to innovative projects. Please find my resume attached for your consideration.'),

(8,8, 8, '2024-04-07 11:30:00', 'I am excited to apply for the HR Specialist position at your organization. With experience in recruitment and employee relations, I am confident in my ability to support your HR team in achieving its goals. Please find my resume attached for your review.'),

(9,9, 9, '2024-04-02 12:00:00', 'I am writing to express my interest in the Financial Analyst position at your company. With a strong analytical mindset and experience in financial modeling, I am eager to contribute my skills to your finance team. Please find my resume attached for your consideration.'),

(10,10, 10, '2024-04-17 12:30:00', 'I am excited to apply for the Content Writer position at your organization. With a passion for storytelling and experience in content creation, I am confident in my ability to produce engaging and impactful content for your brand. Please find my resume attached for your review.');

```
mysql> select * from applications;
```

ApplicationID	JobID	ApplicantID	ApplicationDate	CoverLetter
1	1	1	2024-04-19 08:00:00	I am excited to apply for the Software Engineer position at your esteemed organization. With a strong background in software development and a passion for innovation, I am confident in my ability to contribute effectively to your team. Please find my resume attached for your review. Thank you for considering my application.
2	2	2	2024-04-20 08:30:00	I am writing to express my interest in the Data Analyst position at your company. With expertise in data analysis and visualization, I am eager to leverage my skills to extract valuable insights from data. Please find my resume attached for your review. Thank you for considering my application.
3	3	3	2024-04-09 09:00:00	I am enthusiastic about the Marketing Manager role at your organization. With a track record of executing successful marketing campaigns, I am excited to bring my creativity and strategic thinking to your team. Please find my resume attached for your consideration.
4	4	4	2024-04-29 09:30:00	I am interested in the Graphic Designer position and thrilled about the opportunity to contribute my design skills to your team. With a keen eye for aesthetics and attention to detail, I am confident in my ability to create visually appealing graphics. Please find my resume attached for your review.
5	5	5	2024-04-15 10:00:00	I am applying for the Project Manager position at your company. With experience in leading cross-functional teams and delivering projects on time and within budget, I am eager to bring my project management skills to your organization. Please find my resume attached for your consideration.
6	6	6	2024-04-10 10:30:00	I am excited to apply for the Customer Support Representative position at your organization. With a passion for providing excellent customer service and resolving issues efficiently, I am confident in my ability to contribute positively to your team. Please find my resume attached for your review.
7	7	7	2024-04-11 11:00:00	I am writing to express my interest in the Software Engineer Intern position at your company. As a recent graduate in computer science, I am eager to gain practical experience in software development and contribute to innovative projects. Please find my resume attached for your consideration.
8	8	8	2024-04-07 11:30:00	I am excited to apply for the HR Specialist position at your organization. With experience in recruitment and employee relations, I am confident in my ability to support your HR team in achieving its goals. Please find my resume attached for your review.
9	9	9	2024-04-02 12:00:00	I am writing to express my interest in the Financial Analyst position at your company. With a strong analytical mindset and experience in financial modeling, I am eager to contribute my skills to your finance team. Please find my resume attached for your consideration.
10	10	10	2024-04-17 12:30:00	I am excited to apply for the Content Writer position at your organization. With a passion for storytelling and experience in content creation, I am confident in my ability to produce engaging and impactful content for your brand. Please find my resume attached for your review.

```
10 rows in set (0.00 sec)
```

3. Define appropriate primary keys, foreign keys, and constraints.

4. Ensure the script handles potential errors, such as if the database or tables already exist.

5. Write an SQL query to count the number of applications received for each job listing in the "Jobs" table. Display the job title and the corresponding application count. Ensure that it lists all jobs, even if they have no applications.

```
select j.jobID,j.jobTitle,count(a.jobID) as application_count from jobs j left join applications a on j.jobID=a.jobID group by j.jobID,j.JobTitle;
```

```
mysql> select j.jobID,j.jobTitle,count(a.jobID) as application_count from jobs j left join applications
a on j.jobID=a.jobID group by j.jobID,j.JobTitle;
```

jobID	jobTitle	application_count
1	Software Developer	1
2	Data Analyst	1
3	Marketing Manager	1
4	Graphic Designer	1
5	Project Manager	1
6	Customer Support Representative	1
7	Software Engineer Intern	1
8	Human Resources Specialist	1
9	Financial Analyst	1
10	Content Writer	1

10 rows in set (0.00 sec)

6. Develop an SQL query that retrieves job listings from the "Jobs" table within a specified salary range. Allow parameters for the minimum and maximum salary values. Display the job title, company name, location, and salary for each matching job.

```
select j.jobid,j.jobtitle,c.companyname,c.location,j.salary from jobs j join companies c on
j.jobid=c.companyid where j.salary>=90000 and j.salary<=200000;
```

```
mysql> select j.jobid,j.jobtitle,c.companyname,c.location,j.salary from jobs j join companies c on
j.jobid=c.companyid where j.salary>=90000 and j.salary<=200000;
```

jobid	jobtitle	companyname	location	salary
1	Software Developer	Microsoft	Redmond	110000.00
2	Data Analyst	Google	Mountain View	95000.00
3	Marketing Manager	Apple Inc.	Cupertino	105000.00
5	Project Manager	Facebook	Menlo Park	120000.00
8	Human Resources Specialist	IBM	Armonk	90000.00
9	Financial Analyst	Intel	Santa Clara	100000.00

6 rows in set (0.01 sec)

7. Write an SQL query that retrieves the job application history for a specific applicant. Allow a parameter for the ApplicantID, and return a result set with the job titles, company names, and application dates for all the jobs the applicant has applied to.

```
select j.jobtitle,c.companyname,a.applicationdate from applications a join jobs j on
j.jobid=a.jobid join companies c on j.companyid=c.companyid where applicationid=5;
```

```
mysql> select j.jobtitle,c.companyname,a.applicationdate from applications a join jobs j on j.jobid=a.jobid join companies c on j.companyid=c.companyid where applicationid=5;
```

jobtitle	companyname	applicationdate
Project Manager	Facebook	2024-04-15 10:00:00

```
1 row in set (0.00 sec)
```

8. Create an SQL query that calculates and displays the average salary offered by all companies for job listings in the "Jobs" table. Ensure that the query filters out jobs with a salary of zero.

```
select avg(salary) as average_salary from jobs where salary>0;
```

```
mysql> select avg(salary) as average_salary from jobs where salary>0;
```

average_salary
92000.000000

```
1 row in set (0.00 sec)
```

9. Write an SQL query to identify the company that has posted the most job listings. Display the company name along with the count of job listings they have posted. Handle ties if multiple companies have the same maximum count.

```
select c.companyname,count(j.companyid) as no_of_jobs from companies c join jobs j on c.companyid=j.companyid group by c.companyid order by no_of_jobs desc limit 1;
```

```
mysql> select c.companyname,count(j.companyid) as no_of_jobs from companies c join jobs j on c.companyid=j.companyid group by c.companyid order by no_of_jobs desc limit 1;
```

companyname	no_of_jobs
Microsoft	1

```
1 row in set (0.00 sec)
```

10. Find the applicants who have applied for positions in companies located in 'CityX' and have at least 3 years of experience.

```
select applicantid,firstname from applicants where applicantid in (select applicantid from applications where jobid in (select jobid from jobs where companyid in(select companyid from companies where location='seattle'))and experience>=3);
```

```
mysql> select applicantid,firstname from applicants where applicantid in (select applicantid
from applications where jobid in (select jobid from jobs where companyid in(select companyid
from companies where location='seattle'))and experience>=3);
+-----+-----+
| applicantid | firstname |
+-----+-----+
|          4 | Emily    |
+-----+-----+
1 row in set (0.00 sec)
```

11. Retrieve a list of distinct job titles with salaries between \$60,000 and \$80,000.

select distinct jobtitle,salary from jobs where salary between 60000 and 80000;

```
mysql> select distinct jobtitle,salary from jobs where salary between 60000 and 80000;
+-----+-----+
| jobtitle          | salary    |
+-----+-----+
| Graphic Designer  | 80000.00  |
| Customer Support Representative | 75000.00  |
| Software Engineer Intern | 60000.00  |
+-----+-----+
3 rows in set (0.01 sec)
```

12. Find the jobs that have not received any applications.

select j.jobtitle from jobs j join applications a on j.jobid=a.jobid where a.jobid is null;

```
mysql> select j.jobtitle from jobs j join applications a on j.jobid=a.jobid where a.jobid is null;
Empty set (0.00 sec)
```

13. Retrieve a list of job applicants along with the companies they have applied to and the positions they have applied for.

select ap.applicantid,ap.firstname,c.companyname,j.jobtitle from applicants ap join applications a on ap.applicantid=a.applicantid join jobs j on a.jobid=j.jobid join companies c on j.companyid =c.companyid;


```
mysql> select ap.applicantid,ap.firstname,c.companyname,j.jobtitle from applicants ap join applications a on ap.applicantid=a.applicantid join jobs j on a.jobid=j.jobid join companies c on j.companyid=c.companyid;
```

applicantid	firstname	companyname	jobtitle
1	John	Microsoft	Software Developer
2	Jane	Google	Data Analyst
3	Michael	Apple Inc.	Marketing Manager
4	Emily	Amazon	Graphic Designer
5	Daniel	Facebook	Project Manager
6	Sophia	Adobe	Customer Support Representative
7	Christopher	Oracle	Software Engineer Intern
8	Olivia	IBM	Human Resources Specialist
9	William	Intel	Financial Analyst
10	Ava	Salesforce	Content Writer

10 rows in set (0.00 sec)

14. Retrieve a list of companies along with the count of jobs they have posted, even if they have not received any applications.

```
select c.companyname,count(j.jobid) as jobs_count from companies c join jobs j on c.companyid=j.jobid group by companyname;
```

```
mysql> select c.companyname,count(j.jobid) as jobs_count from companies c join jobs j on c.companyid=j.jobid group by companyname;
```

companyname	jobs_count
Microsoft	1
Google	1
Apple Inc.	1
Amazon	1
Facebook	1
Adobe	1
Oracle	1
IBM	1
Intel	1
Salesforce	1

10 rows in set (0.00 sec)

15. List all applicants along with the companies and positions they have applied for, including those who have not applied.

```
select ap.applicantid,ap.firstname,c.companyname,j.jobtitle from applicants ap join applications a on ap.applicantid=a.applicantid join jobs j on a.jobid=j.jobid join companies c on j.companyid=c.companyid;
```

```
mysql> select ap.applicantid,ap.firstname,c.companyname,j.jobtitle from applicants ap join applications a on ap.applicantid=a.applicantid join jobs j on a.jobid=j.jobid join companies c on j.companyid=c.companyid;
```

applicantid	firstname	companyname	jobtitle
1	John	Microsoft	Software Developer
2	Jane	Google	Data Analyst
3	Michael	Apple Inc.	Marketing Manager
4	Emily	Amazon	Graphic Designer
5	Daniel	Facebook	Project Manager
6	Sophia	Adobe	Customer Support Representative
7	Christopher	Oracle	Software Engineer Intern
8	Olivia	IBM	Human Resources Specialist
9	William	Intel	Financial Analyst
10	Ava	Salesforce	Content Writer

10 rows in set (0.00 sec)

16. Find companies that have posted jobs with a salary higher than the average salary of all jobs.

```
select c.companyid,c.companyname,j.salary from companies c join jobs j on c.companyid=j.companyid where j.salary>(select avg(salary) from jobs);
```

```
mysql> select c.companyid,c.companyname,j.salary from companies c join jobs j on c.companyid=j.companyid where j.salary>(select avg(salary) from jobs);
```

companyid	companyname	salary
1	Microsoft	110000.00
2	Google	95000.00
3	Apple Inc.	105000.00
5	Facebook	120000.00
9	Intel	100000.00

5 rows in set (0.00 sec)

17. Display a list of applicants with their names and a concatenated string of their city and state.

```
select concat(firstname,' ',lastname) as FulName,concat(city,',',state ) as location from applicants;
```

```
mysql> select concat(firstname,' ',lastname) as FulName,concat(city,',',state ) as location from applicants;
+-----+-----+
| FulName      | location                    |
+-----+-----+
| John Doe     | Narayanapuram,Andhra Pradesh |
| Jane Smith   | Tadepalligudem,Telangana    |
| Michael Johnson | Narayanapuram,Andhra Pradesh |
| Emily Brown  | Tadepalligudem,Telangana    |
| Daniel Martinez | Narayanapuram,Andhra Pradesh |
| Sophia Taylor | Tadepalligudem,Telangana    |
| Christopher Anderson | Pothavaram,Tamil Nadu |
| Olivia Wilson | Kodamanchali,Karnataka      |
| William Thompson | Pothavaram,Tamil Nadu |
| Ava Clark    | Kodamanchali,Karnataka      |
+-----+-----+
10 rows in set (0.00 sec)
```

18. Retrieve a list of jobs with titles containing either 'Developer' or 'Engineer'.

```
select * from jobs where jobtitle like '%developer%' or jobtitle like '%engineer%';
```

```
select * from jobs where jobtitle like '%developer%' or jobtitle like '%engineer%';
```

JobID	CompanyID	JobTitle	JobDescription	JobLocation	Salary	JobType	PostedDate
1	1	Software Developer	Develop and maintain software applications for various platforms.	San Francisco	110000.00	Full-time	2024-04-19 08:00:00
7	7	Software Engineer Intern	Assist in developing and testing software applications under supervision.	San Jose	60000.00	Internship	2024-04-19 11:00:00

```
2 rows in set (0.00 sec)
```

19. Retrieve a list of applicants and the jobs they have applied for, including those who have not applied and jobs without applicants.

```
select a.applicantid,a.firstname,j.jobtitle from applicants a join applications ap on
a.applicantid=ap.applicantid join jobs j on ap.jobid=j.jobid;
```

```
mysql> select a.applicantid,a.firstname,j.jobtitle from applicants a join applications ap on a.applicantid=ap.applicantid join jobs j on ap.jobid=j.jobid;
```

applicantid	firstname	jobtitle
1	John	Software Developer
2	Jane	Data Analyst
3	Michael	Marketing Manager
4	Emily	Graphic Designer
5	Daniel	Project Manager
6	Sophia	Customer Support Representative
7	Christopher	Software Engineer Intern
8	Olivia	Human Resources Specialist
9	William	Financial Analyst
10	Ava	Content Writer

10 rows in set (0.00 sec)

20. List all combinations of applicants and companies where the company is in a specific city and the applicant has more than 2 years of experience. For example: city=Chennai

Select a.FirstName,a.Lastname,a.Experience,c.CompanyName,c.Location from Applicants a join applications ap on a.applicantid=ap.applicantid Join jobs j on ap.jobid=j.jobid join Companies c on j.companyid=c.companyid where c.location='mountain view' and a.Experience>2;

```
mysql> Select a.FirstName,a.Lastname,a.Experience,c.CompanyName,c.Location from Applicants a
-> join applications ap on a.applicantid=ap.applicantid
-> Join jobs j on ap.jobid=j.jobid
-> join Companies c on j.companyid=c.companyid
-> where c.location='mountain view' and a.Experience>2;
```

FirstName	Lastname	Experience	CompanyName	Location
Jane	Smith	5	Google	Mountain View

1 row in set (0.00 sec)