

MUHAMMAD ANAS

(cs221004)

LAB # 04

```
1 • create database lab_04_task;
2 • use lab_04_task;
3
4 • CREATE TABLE Employee (
5     employeeID INT AUTO_INCREMENT PRIMARY KEY,
6     firstName VARCHAR(20) NOT NULL,
7     lastName VARCHAR(20) NOT NULL,
8     hiringDate DATE,
9     deptID INT,
10    jobID VARCHAR(15)
11 );
12
13 • CREATE TABLE Department (
14     deptID INT AUTO_INCREMENT PRIMARY KEY,
15     deptName VARCHAR(30) NOT NULL,
16     locationID INT
17 );
18
19 • CREATE TABLE Job (
20     jobID VARCHAR(10) PRIMARY KEY,
21     jobTitle VARCHAR(30) NOT NULL,
22     salary DECIMAL(8, 2)
23 );
```

Output :

Action Output

| # | Time | Action | Message |
|------|----------|---|-------------------|
| ✓ 7 | 01:58:16 | create database lab_04_task | 1 row(s) affected |
| ✓ 8 | 01:58:19 | use lab_04_task | 0 row(s) affected |
| ✓ 9 | 01:58:30 | CREATE TABLE Employee (employeeID INT AUTO_INCREMENT PRIMARY KEY, firstName VARCHAR(2... | 0 row(s) affected |
| ✓ 10 | 01:58:51 | CREATE TABLE Department (deptID INT AUTO_INCREMENT PRIMARY KEY, deptName VARCHAR(30)... | 0 row(s) affected |

```

19 • CREATE TABLE Job (
20     jobID VARCHAR(10) PRIMARY KEY,
21     jobTitle VARCHAR(30) NOT NULL,
22     salary DECIMAL(8, 2)
23 );
24
25 • CREATE TABLE Location (
26     locationID INT AUTO_INCREMENT PRIMARY KEY,
27     city VARCHAR(20) NOT NULL DEFAULT 'Karachi',
28     country VARCHAR(20) NOT NULL DEFAULT 'Pakistan'
29 );
30
31 • INSERT INTO Employee (firstName, lastName, hiringDate, deptID, jobID) VALUES
32 ('Muhammad', 'Anas', '2024-01-25', 1, 'IT1004'),
33 ('Ali', 'Bilal', '2023-02-22', 2, 'MAN1005'),
34 ('Talha', 'Nizamani', '2024-04-15', NULL, 'IT1003'),
35 ('Faizan', 'Awan', '2023-08-05', 1, 'FIN1001');
36
37 • INSERT INTO Department (deptName, locationID) VALUES
38 ('Information Technology', 1),
39 ('Management', 2),
40 ('Finance', NULL);
41

```

Output

Action Output

| # | Time | Action | Message |
|----|----------|--|---|
| 11 | 01:59:37 | CREATE TABLE Job (jobID VARCHAR(10) PRIMARY KEY, jobTitle VARCHAR(30) NOT NULL, salary D... | 0 row(s) affected |
| 12 | 02:00:15 | CREATE TABLE Location (locationID INT AUTO_INCREMENT PRIMARY KEY, city VARCHAR(20) NOT ... | 0 row(s) affected |
| 13 | 02:04:14 | INSERT INTO Employee (firstName, lastName, hiringDate, deptID, jobID) VALUES ('Muhammad', 'Anas', '2024-0... | Error Code: 1292. Incorrect date value: '2023-02-30' for column 'hiringDa |
| 14 | 02:04:37 | INSERT INTO Employee (firstName, lastName, hiringDate, deptID, jobID) VALUES ('Muhammad', 'Anas', '2024-0... | 4 row(s) affected Records: 4 Duplicates: 0 Warnings: 0 |

```

35     ('Faizan', 'Awan', '2023-08-05', 1, 'FIN1001');
36
37 • INSERT INTO Department (deptName, locationID) VALUES
38 ('Information Technology', 1),
39 ('Management', 2),
40 ('Finance', NULL);
41
42 • INSERT INTO Job (jobID, jobTitle, salary) VALUES
43 ('IT1004', 'Developer', 90000.00),
44 ('MAN1005', 'Manager', 80000.00),
45 ('FIN1001', 'Finance', 70000.00);
46
47 • SELECT * FROM employee;

```

Result Grid Filter Rows: Edit: Export/Import: Wrap Cell Content:

| | employeeID | firstName | lastName | hiringDate | deptID | jobID |
|---|------------|-----------|----------|------------|--------|---------|
| ▶ | 5 | Muhammad | Anas | 2024-01-25 | 1 | IT1004 |
| | 6 | Ali | Bilal | 2023-02-22 | 2 | MAN1005 |
| | 7 | Talha | Nizamani | 2024-04-15 | NULL | IT1003 |
| | 8 | Faizan | Awan | 2023-08-05 | 1 | FIN1001 |
| • | NULL | NULL | NULL | NULL | NULL | NULL |

employee 1 x

Output

Action Output

| # | Time | Action | Message |
|----|----------|---|--|
| 14 | 02:04:37 | INSERT INTO Employee (firstName, lastName, hiringDate, deptID, jobID) VALUES ('Muhammad', 'Anas', '2024-... | 4 row(s) affected Records: 4 Duplicates: 0 Warnings: 0 |
| 15 | 02:06:38 | INSERT INTO Job (jobID, jobTitle, salary) VALUES ('IT1004', 'Developer', 90000.00), ('MAN1005', 'Manager', 8... | 3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0 |
| 16 | 02:09:30 | SELECT * FROM lab_04_task.employee LIMIT 0, 1000 | 4 row(s) returned |
| 17 | 02:10:24 | SELECT * FROM employee LIMIT 0, 1000 | 4 row(s) returned |

46

47 • `SELECT * FROM Department;`

<

Result Grid



Filter Rows:

Edit:



Export/Import:



Wrap Cell Co

| | deptID | deptName | locationID |
|---|--------|------------------------|------------|
| ▶ | 1 | Information Technology | 1 |
| | 2 | Management | 2 |
| | 3 | Finance | NULL |
| * | NULL | NULL | NULL |

Department 4 ×

Output



Action Output



| | # | Time | Action |
|---|----|----------|--|
| ✓ | 18 | 02:11:00 | SELECT * FROM department LIMIT 0, 1000 |
| ✓ | 19 | 02:11:21 | SELECT * FROM Department LIMIT 0, 1000 |
| ✓ | 20 | 02:11:28 | INSERT INTO Department (deptName, locationID) VALUES ('Information Technology', 1), ('Management |
| ✓ | 21 | 02:11:32 | SELECT * FROM Department LIMIT 0, 1000 |

46

47 • `SELECT * FROM job;`

<

Result Grid



Filter Rows:

Edit:



Export/Import:



Wrap Cell Content:

| | jobID | jobTitle | salary |
|---|---------|-----------|----------|
| ▶ | FIN1001 | Finance | 70000.00 |
| | IT1004 | Developer | 90000.00 |
| | MAN1005 | Manager | 80000.00 |
| * | NULL | NULL | NULL |

job 5 ×

Output



Action Output



| | # | Time | Action | Message |
|---|----|----------|---|-------------|
| ✓ | 19 | 02:11:21 | SELECT * FROM Department LIMIT 0, 1000 | 0 row(s) re |
| ✓ | 20 | 02:11:28 | INSERT INTO Department (deptName, locationID) VALUES ('Information Technology', 1), ('Management', 2), ('F... | 3 row(s) al |
| ✓ | 21 | 02:11:32 | SELECT * FROM Department LIMIT 0, 1000 | 3 row(s) re |
| ✓ | 22 | 02:11:51 | SELECT * FROM job LIMIT 0, 1000 | 3 row(s) re |

```

47 • SELECT * FROM job;
48 • describe employee;

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

| Field | Type | Null | Key | Default | Extra |
|------------|-------------|------|-----|---------|----------------|
| employeeID | int | NO | PRI | NULL | auto_increment |
| firstName | varchar(20) | NO | | NULL | |
| lastName | varchar(20) | NO | | NULL | |
| hiringDate | date | YES | | NULL | |
| deptID | int | YES | | NULL | |
| jobID | int | YES | | NULL | |

Result 6 x

Output

Action Output

| # | Time | Action |
|------|----------|---|
| ✓ 20 | 02:11:28 | INSERT INTO Department (deptName, locationID) VALUES ('Information Technology', 1), ('Management', 2) |
| ✓ 21 | 02:11:32 | SELECT * FROM Department LIMIT 0, 1000 |
| ✓ 22 | 02:11:51 | SELECT * FROM job LIMIT 0, 1000 |
| ✓ 23 | 02:13:28 | describe employee |

```

47 • SELECT * FROM job;
48 • describe department;

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

| Field | Type | Null | Key | Default | Extra |
|------------|-------------|------|-----|---------|----------------|
| deptID | int | NO | PRI | NULL | auto_increment |
| deptName | varchar(30) | NO | | NULL | |
| locationID | int | YES | | NULL | |

Result 7 x

Output

Action Output

| # | Time | Action | Message |
|------|----------|--|--------------|
| ✓ 21 | 02:11:32 | SELECT * FROM Department LIMIT 0, 1000 | 3 row(s) ret |
| ✓ 22 | 02:11:51 | SELECT * FROM job LIMIT 0, 1000 | 3 row(s) ret |
| ✓ 23 | 02:13:28 | describe employee | 6 row(s) ret |
| ✓ 24 | 02:14:12 | describe department | 3 row(s) ret |

```

47 • SELECT * FROM job;
48 • describe job;

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

| Field | Type | Null | Key | Default | Extra |
|----------|--------------|------|-----|---------|-------|
| jobID | varchar(10) | NO | PRI | NULL | |
| jobTitle | varchar(30) | NO | | NULL | |
| salary | decimal(8,2) | YES | | NULL | |

Result 8 x

Output

Action Output

| # | Time | Action | Message |
|------|----------|---------------------------------|------------|
| ✓ 22 | 02:11:51 | SELECT * FROM job LIMIT 0, 1000 | 3 row(s) r |
| ✓ 23 | 02:13:28 | describe employee | 6 row(s) r |
| ✓ 24 | 02:14:12 | describe department | 3 row(s) r |
| ✓ 25 | 02:14:22 | describe job | 3 row(s) r |

```

49
50 • ALTER TABLE Employee MODIFY COLUMN firstName VARCHAR(50) NOT NULL;
51 • ALTER TABLE Employee MODIFY COLUMN lastName VARCHAR(50) NOT NULL;
52 • ALTER TABLE Department MODIFY COLUMN deptName VARCHAR(50) NOT NULL;
53 • ALTER TABLE Job MODIFY COLUMN jobTitle VARCHAR(50) NOT NULL;
54

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

| Field | Type | Null | Key | Default | Extra |
|----------|--------------|------|-----|---------|-------|
| jobID | varchar(10) | NO | PRI | NULL | |
| jobTitle | varchar(30) | NO | | NULL | |
| salary | decimal(8,2) | YES | | NULL | |

56

```

57 • DELETE FROM Location WHERE locationID = 2;

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58

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59 • UPDATE Department SET locationID = NULL WHERE locationID = 2;

```

60

Result Grid | Filter Rows: | Edit: | Export/Import: |

| locationID | city | country |
|------------|------|---------|
| * NULL | NULL | NULL |

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