

```
MySQL localhost:33060+ ssl SQL > CREATE DATABASE employees;
Query OK, 1 row affected (0.0225 sec)
MySQL localhost:33060+ ssl SQL > USE employees;
Default schema set to 'employees'.
Fetching global names, object names from 'employees' for auto-completion... Press ^C to stop.
```

```
MySQL localhost:33060+ ssl employees SQL > CREATE TABLE emp (
->   ename VARCHAR(20),
->   ecity VARCHAR(20),
->   salary INT,
->   eaddress VARCHAR(50),
->   enumber INT,
->   deptname VARCHAR(20)
-> );
Query OK, 0 rows affected (0.0785 sec)
MySQL localhost:33060+ ssl employees SQL > INSERT INTO emp VALUES ('Amit', 'Delhi', 50000, '123 Main St', 1, 'IT');
Query OK, 1 row affected (0.0225 sec)
MySQL localhost:33060+ ssl employees SQL > INSERT INTO emp VALUES ('Anil', 'Pune', 60000, '456 Elm St', 2, 'HR');
Query OK, 1 row affected (0.0102 sec)
MySQL localhost:33060+ ssl employees SQL > INSERT INTO emp VALUES ('Jani', 'Hyderabad', 70000, '789 Oak St', 3, 'Finance');
Query OK, 1 row affected (0.0098 sec)
MySQL localhost:33060+ ssl employees SQL > INSERT INTO emp VALUES ('Aarav', 'Mumbai', 80000, '101 Pine St', 4, 'Marketing');
Query OK, 1 row affected (0.0112 sec)
MySQL localhost:33060+ ssl employees SQL > INSERT INTO emp VALUES ('Bhavya', 'Delhi', 65000, '202 Maple St', 5, 'Sales');
Query OK, 1 row affected (0.0140 sec)
MySQL localhost:33060+ ssl employees SQL > INSERT INTO emp VALUES ('Virat', 'Delhi', 55000, '203 Maple St', 6, 'Sales');
Query OK, 1 row affected (0.0127 sec)
MySQL localhost:33060+ ssl employees SQL > INSERT INTO emp VALUES ('Ansh', 'Goa', 90000, '204 Maple St', 7, 'Sales');
Query OK, 1 row affected (0.0101 sec)
MySQL localhost:33060+ ssl employees SQL > CREATE TABLE company (
->   cname VARCHAR(20),
->   ccity VARCHAR(20),
->   empcount INT
-> );
Query OK, 0 rows affected (0.0809 sec)
MySQL localhost:33060+ ssl employees SQL > INSERT INTO company VALUES ('Google', 'Delhi', 18000);
Query OK, 1 row affected (0.0123 sec)
MySQL localhost:33060+ ssl employees SQL > INSERT INTO company VALUES ('Apple', 'Pune', 8800);
Query OK, 1 row affected (0.0081 sec)
MySQL localhost:33060+ ssl employees SQL > INSERT INTO company VALUES ('Microsoft', 'Hyderabad', 12000);
Query OK, 1 row affected (0.0082 sec)
MySQL localhost:33060+ ssl employees SQL > INSERT INTO company VALUES ('Oracle', 'Pune', 9000);
Query OK, 1 row affected (0.0077 sec)
MySQL localhost:33060+ ssl employees SQL > INSERT INTO company VALUES ('Facebook', 'Delhi', 8000);
Query OK, 1 row affected (0.0078 sec)
```

```
MySQL localhost:33060+ ssl employees SQL > select * from emp;
+-----+-----+-----+-----+-----+-----+
| ename | ecity | salary | eaddress | enumber | deptname |
+-----+-----+-----+-----+-----+-----+
| Amit  | Delhi | 50000  | 123 Main St | 1       | IT       |
| Anil  | Pune  | 60000  | 456 Elm St  | 2       | HR       |
| Jani  | Hyderabad | 70000  | 789 Oak St  | 3       | Finance  |
| Aarav | Mumbai | 80000  | 101 Pine St | 4       | Marketing|
| Bhavya | Delhi | 65000  | 202 Maple St | 5       | Sales    |
| Virat | Delhi | 55000  | 203 Maple St | 6       | Sales    |
| Ansh  | Goa   | 90000  | 204 Maple St | 7       | Sales    |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.0018 sec)
MySQL localhost:33060+ ssl employees SQL > select * from company;
+-----+-----+-----+
| cname | ccity | empcount |
+-----+-----+-----+
| Google | Delhi | 18000    |
| Apple  | Pune  | 8800     |
| Microsoft | Hyderabad | 12000    |
| Oracle | Pune  | 9000     |
| Facebook | Delhi | 8000     |
+-----+-----+-----+
5 rows in set (0.0018 sec)
```

```

MySQL localhost:33060+ ssl employees SQL > SELECT ename FROM emp WHERE ecity = 'Delhi';
+-----+
| ename |
+-----+
| Amit  |
| Bhavya |
| Virat  |
+-----+
3 rows in set (0.0340 sec)
MySQL localhost:33060+ ssl employees SQL > UPDATE emp SET salary = salary + 500;
Query OK, 7 rows affected (0.0953 sec)

Rows matched: 7  Changed: 7  Warnings: 0
MySQL localhost:33060+ ssl employees SQL > SELECT cname FROM company WHERE empcount > 10000;
+-----+
| cname |
+-----+
| Google |
| Microsoft |
+-----+
2 rows in set (0.0045 sec)
MySQL localhost:33060+ ssl employees SQL > UPDATE company SET ccity = 'Hyderabad' WHERE cname = 'Oracle';
Query OK, 1 row affected (0.0282 sec)

```

```

MySQL localhost:33060+ ssl employees SQL > ALTER TABLE emp ADD COLUMN designation VARCHAR(20);
Query OK, 0 rows affected (0.2619 sec)

Records: 0  Duplicates: 0  Warnings: 0
MySQL localhost:33060+ ssl employees SQL > ALTER TABLE emp MODIFY COLUMN salary FLOAT;
Query OK, 7 rows affected (0.1938 sec)

Records: 7  Duplicates: 0  Warnings: 0
MySQL localhost:33060+ ssl employees SQL > ALTER TABLE emp DROP COLUMN deptname;
Query OK, 0 rows affected (0.0438 sec)

Records: 0  Duplicates: 0  Warnings: 0
MySQL localhost:33060+ ssl employees SQL > ALTER TABLE emp ADD COLUMN company VARCHAR(20);
Query OK, 0 rows affected (0.0545 sec)

```

```

MySQL localhost:33060+ ssl employees SQL > SELECT ename FROM emp WHERE ecity = 'Delhi' AND salary BETWEEN 45000 AND 60000;
+-----+
| ename |
+-----+
| Amit  |
| Virat  |
+-----+
2 rows in set (0.0056 sec)
MySQL localhost:33060+ ssl employees SQL > SELECT ename FROM emp WHERE ename LIKE 'A%';
+-----+
| ename |
+-----+
| Amit  |
| Anil  |
| Aarav |
| Ansh  |
+-----+
4 rows in set (0.0071 sec)
MySQL localhost:33060+ ssl employees SQL > SELECT cname FROM company WHERE ccity = 'Pune' AND empcount NOT BETWEEN 9000 AND 10000;
+-----+
| cname |
+-----+
| Apple |
+-----+
1 row in set (0.0021 sec)
MySQL localhost:33060+ ssl employees SQL > SELECT cname FROM company WHERE cname NOT LIKE '%e';
+-----+
| cname |
+-----+
| Microsoft |
| Facebook  |
+-----+
2 rows in set (0.0035 sec)

```

```

MySQL localhost:33060+ ssl employees SQL > SELECT SUM(salary), AVG(salary) FROM emp;
+-----+
| SUM(salary) | AVG(salary) |
+-----+
| 473500 | 67642.85714285714 |
+-----+
1 row in set (0.0137 sec)
MySQL localhost:33060+ ssl employees SQL > SELECT COUNT(*) FROM emp WHERE ecity = 'Delhi';
+-----+
| COUNT(*) |
+-----+
| 3 |
+-----+
1 row in set (0.0029 sec)
MySQL localhost:33060+ ssl employees SQL > SELECT MAX(salary), MIN(salary) FROM emp WHERE ecity = 'Delhi';
+-----+
| MAX(salary) | MIN(salary) |
+-----+
| 65500 | 50500 |
+-----+
1 row in set (0.0056 sec)

```

```
MySQL localhost:33060+ ssl employees SQL > SELECT ename FROM emp ORDER BY ename DESC;
+-----+
| ename |
+-----+
| Virat |
| Jani  |
| Bhavya|
| Ansh  |
| Anil  |
| Amit  |
| Aarav |
+-----+
7 rows in set (0.0074 sec)
MySQL localhost:33060+ ssl employees SQL > SELECT company, COUNT(*) FROM emp GROUP BY company;
+-----+-----+
| company | COUNT(*) |
+-----+-----+
| Google  | 1        |
| Apple   | 2        |
| NULL    | 1        |
| Oracle  | 2        |
| Facebook| 1        |
+-----+-----+
5 rows in set (0.0128 sec)
MySQL localhost:33060+ ssl employees SQL > SELECT company FROM emp GROUP BY company HAVING AVG(salary) > 60000;
+-----+
| company |
+-----+
| Apple   |
| NULL    |
| Oracle  |
| Facebook|
+-----+
```

```
MySQL localhost:33060+ ssl employees SQL > ALTER TABLE emp ADD PRIMARY KEY (enumber);
Query OK, 0 rows affected (0.3325 sec)

Records: 0 Duplicates: 0 Warnings: 0
MySQL localhost:33060+ ssl employees SQL > ALTER TABLE company ADD PRIMARY KEY (cname);
Query OK, 0 rows affected (0.1519 sec)

Records: 0 Duplicates: 0 Warnings: 0
MySQL localhost:33060+ ssl employees SQL > ALTER TABLE emp ADD FOREIGN KEY (company) REFERENCES company(cname);
Query OK, 7 rows affected (0.3062 sec)

Records: 7 Duplicates: 0 Warnings: 0
MySQL localhost:33060+ ssl employees SQL > ALTER TABLE emp ADD CHECK (salary > 0);
Query OK, 7 rows affected (0.1900 sec)

Records: 7 Duplicates: 0 Warnings: 0
MySQL localhost:33060+ ssl employees SQL > ALTER TABLE company ADD UNIQUE (cname);
Query OK, 0 rows affected (0.0768 sec)

Records: 0 Duplicates: 0 Warnings: 0
MySQL localhost:33060+ ssl employees SQL > ALTER TABLE company ALTER COLUMN ccity SET DEFAULT 'Delhi';
Query OK, 0 rows affected (0.0333 sec)
```

```
MySQL localhost:33060+ ssl employees SQL > RENAME TABLE emp TO employees;
Query OK, 0 rows affected (0.0649 sec)
MySQL localhost:33060+ ssl employees SQL > ALTER TABLE employees CHANGE COLUMN ename empname VARCHAR(20);
Query OK, 0 rows affected (0.0628 sec)
```

```
MySQL localhost:33060+ ssl employees SQL > SELECT * FROM employees JOIN company ON employees.company = company.cname;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| empname | ccity | salary | eaddress | enumber | designation | company | cname | ccity | empcount |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Anil    | Pune  | 60500  | 456 Elm St | 2      | NULL        | Apple   | Apple | Pune  | 8800     |
| Ansh    | Goa   | 90500  | 204 Maple St | 7      | NULL        | Apple   | Apple | Pune  | 8800     |
| Bhavya  | Delhi | 65500  | 202 Maple St | 5      | NULL        | Facebook| Facebook| Delhi | 8000     |
| Amit    | Delhi | 50500  | 123 Main St | 1      | NULL        | Google  | Google | Delhi | 18000    |
| Aarav   | Mumbai | 80500  | 101 Pine St | 4      | NULL        | Oracle  | Oracle | Hyderabad | 9000    |
| Virat   | Delhi | 55500  | 203 Maple St | 6      | NULL        | Oracle  | Oracle | Hyderabad | 9000    |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.1944 sec)
MySQL localhost:33060+ ssl employees SQL > SELECT * FROM employees JOIN company ON employees.company = company.cname WHERE company.cname = 'Microsoft';
Empty set (0.0071 sec)
```

```
MySQL localhost:33060+ ssl employees SQL > SELECT enumber FROM employees WHERE ccity = 'Delhi' UNION SELECT cname FROM company WHERE ccity = 'Pune';
+-----+
| enumber |
+-----+
| 1       |
| 5       |
| 6       |
| Apple   |
+-----+
4 rows in set (0.0205 sec)
MySQL localhost:33060+ ssl employees SQL > SELECT enumber FROM employees WHERE ccity = 'Delhi' UNION SELECT cname FROM company WHERE ccity != 'Pune';
+-----+
| enumber |
+-----+
| 1       |
| 5       |
| 6       |
| Facebook|
| Google  |
| Microsoft|
| Oracle  |
+-----+
```

```

MySQL localhost:33060+ ssl employees SQL > SELECT REVERSE(empname) FROM employees;
+-----+
| REVERSE(empname) |
+-----+
| timA             |
| linA             |
| inaJ             |
| varaA            |
| ayvahB           |
| tariV            |
| hsnA             |
+-----+
7 rows in set (0.0070 sec)
MySQL localhost:33060+ ssl employees SQL > SELECT UPPER(ccity) FROM company;
+-----+
| UPPER(ccity) |
+-----+
| PUNE         |
| DELHI        |
| DELHI        |
| HYDERABAD    |
| HYDERABAD    |
+-----+
5 rows in set (0.0067 sec)
MySQL localhost:33060+ ssl employees SQL > SELECT CONCAT(empname, ' ', ecity) FROM employees;
+-----+
| CONCAT(empname, ' ', ecity) |
+-----+
| Amit Delhi                  |
| Anil Pune                   |
| Jani Hyderabad              |
| Aarav Mumbai                |
| Bhavya Delhi                 |
| Virat Delhi                  |
| Ansh Goa                    |
+-----+
7 rows in set (0.0043 sec)

```

```

MySQL localhost:33060+ ssl employees SQL > CREATE VIEW emp_view AS SELECT empname, ecity FROM employees;
Query OK, 0 rows affected (0.0144 sec)
MySQL localhost:33060+ ssl employees SQL > UPDATE emp_view SET ecity = 'Delhi' WHERE empname = 'John';
Query OK, 0 rows affected (0.0022 sec)

Rows matched: 0 Changed: 0 Warnings: 0
MySQL localhost:33060+ ssl employees SQL > CREATE VIEW emp_company_view AS SELECT empname, ecity, salary, cname, ccity FROM employees, company;
Query OK, 0 rows affected (0.0167 sec)
MySQL localhost:33060+ ssl employees SQL > UPDATE emp_company_view SET salary = salary + 1000 WHERE cname = 'Apple';
Query OK, 7 rows affected (0.0143 sec)

Rows matched: 7 Changed: 7 Warnings: 0

```

```

MySQL localhost:33060+ ssl employees SQL > CREATE INDEX ename_index ON employees(empname);
Query OK, 0 rows affected (0.1892 sec)

Records: 0 Duplicates: 0 Warnings: 0
MySQL localhost:33060+ ssl employees SQL > CREATE INDEX company_index ON company(cname, ccity);
Query OK, 0 rows affected (0.0917 sec)

Records: 0 Duplicates: 0 Warnings: 0
MySQL localhost:33060+ ssl employees SQL > DROP INDEX company_index ON company;
Query OK, 0 rows affected (0.0448 sec)

```

```

MySQL localhost:33060+ ssl employees SQL > DELIMITER //
MySQL localhost:33060+ ssl employees SQL > CREATE PROCEDURE increase_salary()
-> BEGIN
->     DECLARE avg_salary INT;
->     SELECT AVG(salary) INTO avg_salary FROM employees;
->     IF avg_salary < 10000 THEN
->         SELECT 'Increasing salary by 1000';
->         UPDATE employees SET salary = salary + 1000;
->     END IF;
-> END//
Query OK, 0 rows affected (0.0816 sec)
MySQL localhost:33060+ ssl employees SQL > DELIMITER ;
MySQL localhost:33060+ ssl employees SQL >
MySQL localhost:33060+ ssl employees SQL > CALL increase_salary();
Query OK, 1 row affected (0.0148 sec)

```

```

MySQL localhost:33060+ ssl employees SQL > DELIMITER //
MySQL localhost:33060+ ssl employees SQL >
MySQL localhost:33060+ ssl employees SQL > CREATE PROCEDURE display_employee(IN salaryin INT)
-> BEGIN
->     SELECT * FROM employees WHERE salary = salaryin;
-> END//
Query OK, 0 rows affected (0.0185 sec)
MySQL localhost:33060+ ssl employees SQL >
MySQL localhost:33060+ ssl employees SQL > DELIMITER ;
MySQL localhost:33060+ ssl employees SQL >
MySQL localhost:33060+ ssl employees SQL > CALL display_employee(62500);
+-----+-----+-----+-----+-----+-----+-----+
| empname | ecity | salary | eaddress | enumber | designation | company |
+-----+-----+-----+-----+-----+-----+-----+
| Anil    | Pune  | 62500  | 456 Elm St | 2       | NULL        | Apple   |
+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.0045 sec)

```