MariaDB [classroom]> CREATE TABLE STUDENT (roll\_no INT(5) NOT NULL AUTO\_INCREMENT, name TEXT, class VARCHAR(3), marks INT(3), grade CHAR(1), fees INT(5), PRIMARY KEY(roll\_no));

Query OK, 0 rows affected (0.363 sec)

MariaDB [classroom]> INSERT INTO `student` (`roll\_no`, `name`, `class`, `marks`, `grade`, `fees`) VALUES (1, 'Dhamini', 'BCA', 80, 'A', 50000);

Query OK, 1 row affected (0.081 sec)

MariaDB [classroom]> INSERT INTO `student` (`roll\_no`, `name`, `class`, `marks`, `grade`, `fees`) VALUES (2, 'Ram Sharma', 'BCA', 54, 'B', 52000);

Query OK, 1 row affected (0.073 sec)

MariaDB [classroom]> INSERT INTO `student` (`roll\_no`, `name`, `class`, `marks`, `grade`, `fees`) VALUES (3, 'Subham Gadal', 'BBM', 45, 'C', 35000);

Query OK, 1 row affected (0.073 sec)

MariaDB [classroom]> INSERT INTO `student` (`roll\_no`, `name`, `class`, `marks`, `grade`, `fees`) VALUES (4, 'Akshay Kumar', 'BBA', 35, 'C', 37000);

Query OK, 1 row affected (0.068 sec)

MariaDB [classroom]> INSERT INTO `student` (`roll\_no`, `name`, `class`, `marks`, `grade`, `fees`) VALUES (5, 'Ramesh Singh', 'BBA', 70, 'A', 37500);

Query OK, 1 row affected (0.069 sec)

MariaDB [classroom]> INSERT INTO `student` (`roll\_no`, `name`, `class`, `marks`, `grade`, `fees`) VALUES (6, 'Arun Tirwa', 'BCOM', 60, 'B', 28000);

Query OK, 1 row affected, 1 warning (0.069 sec)

MariaDB [classroom]> INSERT INTO `student` (`roll\_no`, `name`, `class`, `marks`, `grade`, `fees`) VALUES (7, 'Dilip Kumar', 'BSc', 85, 'O', 62000);

Query OK, 1 row affected (0.087 sec)

MariaDB [classroom]> INSERT INTO `student` (`roll\_no`, `name`, `class`, `marks`, `grade`, `fees`) VALUES (8, 'Barun Rao', 'BSc', 10, 'C', 62000);

Query OK, 1 row affected (0.079 sec)

MariaDB [classroom]> INSERT INTO `student` (`roll\_no`, `name`, `class`, `marks`, `grade`, `fees`) VALUES (9, 'Monika Sharma', 'BCOM', 12, 'C', 29000);

Query OK, 1 row affected, 1 warning (0.108 sec)

MariaDB [classroom]> INSERT INTO `student` (`roll\_no`, `name`, `class`, `marks`, `grade`, `fees`) VALUES (10, 'Debjyoti Roy', 'BBM', 49, 'C', 34750);

Query OK, 1 row affected (0.107 sec)

MariaDB [classroom]> desc STUDENT;

+---------+------------+------+-----+---------+----------------+

| Field | Type | Null | Key | Default | Extra |

+---------+------------+------+-----+---------+----------------+

| roll\_no | int(5) | NO | PRI | NULL | auto\_increment |

| name | text | YES | | NULL | |

| class | varchar(3) | YES | | NULL | |

| marks | int(3) | YES | | NULL | |

| grade | char(1) | YES | | NULL | |

| fees | int(5) | YES | | NULL | |

+---------+------------+------+-----+---------+----------------+

6 rows in set (0.005 sec)

MariaDB [classroom]> select \* from student where class="BCA";

+---------+---------------+-------+-------+-------+-------+

| roll\_no | name | class | marks | grade | fees |

+---------+---------------+-------+-------+-------+-------+

| 1 | Dhamini Roy | BCA | 80 | A | 50000 |

| 2 | Ram Sharma | BCA | 54 | B | 52000 |

+---------+---------------+-------+-------+-------+-------+

2 rows in set (0.001 sec)

MariaDB [classroom]> select name, grade from student where name LIKE '\_a%';

+---------------+-------+

| name | grade |

+---------------+-------+

| Ram Sharma | B |

| Ramesh Singh | A |

| Barun Rao | C |

+---------------+-------+

3 rows in set (0.001 sec)

MariaDB [classroom]> select \* from student order by name DESC;

+---------+---------------+-------+-------+-------+-------+

| roll\_no | name | class | marks | grade | fees |

+---------+---------------+-------+-------+-------+-------+

| 3 | Subham Gadal | BBM | 45 | C | 35000 |

| 5 | Ramesh Singh | BBA | 70 | A | 37500 |

| 2 | Ram Sharma | BCA | 54 | B | 52000 |

| 9 | Monika Sharma | BCO | 12 | C | 29000 |

| 1 | Dhamini Roy | BCA | 80 | A | 50000 |

| 7 | Dilip Kumar | BSc | 85 | O | 62000 |

| 10 | Debjyoti Roy | BBM | 49 | C | 34750 |

| 8 | Barun Rao | BSc | 10 | C | 62000 |

| 6 | Arun Tirwa | BCO | 60 | B | 28000 |

| 4 | Akshay Kumar | BBA | 35 | C | 37000 |

+---------+---------------+-------+-------+-------+-------+

10 rows in set (0.001 sec)

MariaDB [classroom]> select SUBSTR(name,3 ,5) as name from student;

+-------+

| name |

+-------+

| pta R |

| m Sha |

| bham |

| shay |

| mesh |

| un Ti |

| lip K |

| run R |

| nika |

| bjyot |

+-------+

10 rows in set (0.001 sec)

MariaDB [classroom]> select roll\_no, name, grade from student order by marks;

+---------+---------------+-------+

| roll\_no | name | grade |

+---------+---------------+-------+

| 8 | Barun Rao | C |

| 9 | Monika Sharma | C |

| 4 | Akshay Kumar | C |

| 3 | Subham Gadal | C |

| 10 | Debjyoti Roy | C |

| 2 | Ram Sharma | B |

| 6 | Arun Tirwa | B |

| 5 | Ramesh Singh | A |

| 1 | Dhamini Roy | A |

| 7 | Dilip Kumar | O |

+---------+---------------+-------+

10 rows in set (0.001 sec)

MariaDB [classroom]> select AVG(marks) as AverageMark from student;

+-------------+

| AverageMark |

+-------------+

| 50.0000 |

+-------------+

1 row in set (0.001 sec)

MariaDB [classroom]> select MAX(fees) from student;

+-----------+

| MAX(fees) |

+-----------+

| 62000 |

+-----------+

1 row in set (0.000 sec)

MariaDB [classroom]> select SUM(fees) as TotalFees from student;

+-----------+

| TotalFees |

+-----------+

| 427250 |

+-----------+

1 row in set (0.000 sec)

MariaDB [classroom]> select COUNT(\*) from student;

+----------+

| COUNT(\*) |

+----------+

| 10 |

+----------+

1 row in set (0.001 sec)

MariaDB [classroom]> Select roll\_no || " : Student name is " || name || " from class " || class from student;

+---------------------------------------------------------------------+

| roll\_no || " : Student name is " || name || " from class " || class |

+---------------------------------------------------------------------+

| 1 |

| 1 |

| 1 |

| 1 |

| 1 |

| 1 |

| 1 |

| 1 |

| 1 |

| 1 |

+---------------------------------------------------------------------+

10 rows in set, 2 warnings (0.001 sec)

MariaDB [classroom]> SELECT CONCAT(roll\_no," : Student name is ", name, " from class ", class) as Sentence from student;

+--------------------------------------------------+

| Sentence |

+--------------------------------------------------+

| 1 : Student name is Dhamini Roy from class BCA |

| 2 : Student name is Ram Sharma from class BCA |

| 3 : Student name is Subham Gadal from class BBM |

| 4 : Student name is Akshay Kumar from class BBA |

| 5 : Student name is Ramesh Singh from class BBA |

| 6 : Student name is Arun Tirwa from class BCO |

| 7 : Student name is Dilip Kumar from class BSc |

| 8 : Student name is Barun Rao from class BSc |

| 9 : Student name is Monika Sharma from class BCO |

| 10 : Student name is Debjyoti Roy from class BBM |

+--------------------------------------------------+

10 rows in set (0.001 sec)

MariaDB [classroom]> select CURRENT\_DATE();

+----------------+

| CURRENT\_DATE() |

+----------------+

| 2020-08-02 |

+----------------+

1 row in set (0.001 sec)

MariaDB [classroom]> CREATE TABLE Employee (Employee\_No INT(5) NOT NULL AUTO\_INCREMENT, Employee\_Name TEXT, Designation TEXT, Department TEXT, Salary INT(10), Tax INT(10), Date\_of\_Joining date, PRIMARY KEY(Employee\_No));

Query OK, 0 rows affected (0.225 sec)

MariaDB [classroom]> desc employee;

+-----------------+---------+------+-----+---------+----------------+

| Field | Type | Null | Key | Default | Extra |

+-----------------+---------+------+-----+---------+----------------+

| Employee\_No | int(5) | NO | PRI | NULL | auto\_increment |

| Employee\_Name | text | YES | | NULL | |

| Designation | text | YES | | NULL | |

| Department | text | YES | | NULL | |

| Salary | int(10) | YES | | NULL | |

| Tax | int(10) | YES | | NULL | |

| Date\_of\_Joining | date | YES | | NULL | |

+-----------------+---------+------+-----+---------+----------------+

7 rows in set (0.006 sec)

MariaDB [classroom]> INSERT INTO `employee`(`Employee\_Name`, `Designation`, `Department`, `Salary`, `Tax`, `Date\_of\_Joining`) VALUES ('Dhamini Roy', 'System Engineer', CYBERSEC, 50000, 1000, '2016-11-28');

ERROR 1054 (42S22): Unknown column 'CYBERSEC' in 'field list'

MariaDB [classroom]> INSERT INTO `employee`(`Employee\_Name`, `Designation`, `Department`, `Salary`, `Tax`, `Date\_of\_Joining`) VALUES ('Dhamini Roy', 'System Engineer', 'CYBERSEC', 50000, 1000, '2016-11-28');

Query OK, 1 row affected, 1 warning (0.068 sec)

MariaDB [classroom]> INSERT INTO `employee`(`Employee\_Name`, `Designation`, `Department`, `Salary`, `Tax`, `Date\_of\_Joining`) VALUES ('Ram Shamra', 'Test Engineer', 'ADME', 45000, 1000, '2016-11-28');

Query OK, 1 row affected, 1 warning (0.078 sec)

MariaDB [classroom]> INSERT INTO `employee`(`Employee\_Name`, `Designation`, `Department`, `Salary`, `Tax`, `Date\_of\_Joining`) VALUES ('Amal Nair', 'Operations Executive', 'IT Department', 25000, 200, '2018-10-28');

Query OK, 1 row affected, 1 warning (0.067 sec)

MariaDB [classroom]> INSERT INTO `employee`(`Employee\_Name`, `Designation`, `Department`, `Salary`, `Tax`, `Date\_of\_Joining`) VALUES ('Monika G', 'Operations Executive', 'IT Department', 25000, 200, '2018-8-28');

Query OK, 1 row affected, 1 warning (0.072 sec)

MariaDB [classroom]> INSERT INTO `employee`(`Employee\_Name`, `Designation`, `Department`, `Salary`, `Tax`, `Date\_of\_Joining`) VALUES ('Naveen Kumar', 'Operations Executive', 'IT Department', 25000, 200, '2018-10-28');

Query OK, 1 row affected, 1 warning (0.123 sec)

MariaDB [classroom]> INSERT INTO `employee`(`Employee\_Name`, `Designation`, `Department`, `Salary`, `Tax`, `Date\_of\_Joining`) VALUES ('Abinayashankari', 'System Engineer', 'CYBERSEC', 48000, 889, '2018-01-18');

Query OK, 1 row affected, 1 warning (0.143 sec)

MariaDB [classroom]> INSERT INTO `employee`(`Employee\_Name`, `Designation`, `Department`, `Salary`, `Tax`, `Date\_of\_Joining`) VALUES ('Subham Signh', 'Operations Executive', 'CYBERSEC', 26000, 200, '2018-11-18');

Query OK, 1 row affected, 1 warning (0.053 sec)

MariaDB [classroom]> INSERT INTO `employee`(`Employee\_Name`, `Designation`, `Department`, `Salary`, `Tax`, `Date\_of\_Joining`) VALUES ('Divya Madhavan', 'Operations Executive', 'CYBERSEC', 26000, 200, '2018-11-18');

Query OK, 1 row affected, 1 warning (0.053 sec)

MariaDB [classroom]> INSERT INTO `employee`(`Employee\_Name`, `Designation`, `Department`, `Salary`, `Tax`, `Date\_of\_Joining`) VALUES ('Vaishali', 'Test Engineer', 'ADME', 46000, 1000, '2016-11-28');

Query OK, 1 row affected, 1 warning (0.062 sec)

MariaDB [classroom]> select \* from employee;

+-------------+-----------------+----------------------+---------------+--------+------+-----------------+

| Employee\_No | Employee\_Name | Designation | Department | Salary | Tax | Date\_of\_Joining |

+-------------+-----------------+----------------------+---------------+--------+------+-----------------+

| 1 | Dhamini Roy | System Engineer | CYBERSEC | 50000 | 1000 | 2016-11-28 |

| 2 | Ram Shamra | Test Engineer | ADME | 45000 | 1000 | 2016-11-28 |

| 3 | Amal Nair | Operations Executive | IT Department | 25000 | 200 | 2018-10-28 |

| 4 | Monika G | Operations Executive | IT Department | 25000 | 200 | 2018-08-28 |

| 5 | Naveen Kumar | Operations Executive | IT Department | 25000 | 200 | 2018-10-28 |

| 6 | Abinayashankari | System Engineer | CYBERSEC | 48000 | 889 | 2018-01-18 |

| 7 | Subham Signh | Operations Executive | CYBERSEC | 26000 | 200 | 2018-11-18 |

| 8 | Divya Madhavan | Operations Executive | CYBERSEC | 26000 | 200 | 2018-11-18 |

| 9 | Vaishali | Test Engineer | ADME | 46000 | 1000 | 2016-11-28 |

+-------------+-----------------+----------------------+---------------+--------+------+-----------------+

9 rows in set (0.001 sec)

MariaDB [classroom]> select max(salary) as MAX\_SALARY from employee;

+------------+

| MAX\_SALARY |

+------------+

| 50000 |

+------------+

1 row in set (0.001 sec)

MariaDB [classroom]> select SUM(tax) as TOTAL\_TAX from employee;

+-----------+

| TOTAL\_TAX |

+-----------+

| 4889 |

+-----------+

1 row in set (0.000 sec)

MariaDB [classroom]> SELECT COUNT(\*) FROM EMPLOYEE;

+----------+

| COUNT(\*) |

+----------+

| 9 |

+----------+

1 row in set (0.000 sec)

MariaDB [classroom]> SELECT SUM(TAX) AS TOTAL\_TAX FROM EMPLOYEE WHERE Date\_of\_Joining > '2018-01-01';

+-----------+

| TOTAL\_TAX |

+-----------+

| 1889 |

+-----------+

1 row in set (0.001 sec)

MariaDB [classroom]> SELECT DEPARTMENT FROM EMPLOYEE HAVING AVG(SALARY) > 30000;

+------------+

| DEPARTMENT |

+------------+

| CYBERSEC |

+------------+

1 row in set (0.001 sec)

MariaDB [classroom]> SELECT SUM(SALARY) FROM EMPLOYEE WHERE DEPARTMENT <> 'IT Department';

+-------------+

| SUM(SALARY) |

+-------------+

| 241000 |

+-------------+

1 row in set (0.001 sec)

MariaDB [classroom]> SELECT AVG(SALARY) FROM EMPLOYEE GROUP BY DEPARTMENT;

+-------------+

| AVG(SALARY) |

+-------------+

| 45500.0000 |

| 37500.0000 |

| 25000.0000 |

+-------------+

3 rows in set (0.004 sec)

MariaDB [classroom]> SELECT DEPARTMENT, AVG(SALARY) FROM EMPLOYEE GROUP BY DEPARTMENT;

+---------------+-------------+

| DEPARTMENT | AVG(SALARY) |

+---------------+-------------+

| ADME | 45500.0000 |

| CYBERSEC | 37500.0000 |

| IT Department | 25000.0000 |

+---------------+-------------+

3 rows in set (0.005 sec)

MariaDB [classroom]> SELECT Department, avg(Salary) from employee GROUP BY Department HAVING COUNT(Employee\_Name) < 3

-> ;

+------------+-------------+

| Department | avg(Salary) |

+------------+-------------+

| ADME | 45500.0000 |

+------------+-------------+

1 row in set (0.004 sec)

MariaDB [classroom]> SELECT DEPARTMENT, COUNT(EMPLOYEE\_NAME) FROM EMPLOYEE GROUP BY DEPARTMENT;

+---------------+----------------------+

| DEPARTMENT | COUNT(EMPLOYEE\_NAME) |

+---------------+----------------------+

| ADME | 2 |

| CYBERSEC | 4 |

| IT Department | 3 |

+---------------+----------------------+

3 rows in set (0.005 sec)

MariaDB [classroom]> SELECT COUNT(DEPARTMENT) FROM EMPLOYEE GROUP BY DEPARTMENT HAVING COUNT(EMPLOYEE\_NAME)>3;

+-------------------+

| COUNT(DEPARTMENT) |

+-------------------+

| 4 |

+-------------------+

1 row in set (0.005 sec)

MariaDB [classroom]> SELECT DEPARTMENT, COUNT(EMPLOYEE\_NAME) FROM EMPLOYEE GROUP BY DEPARTMENT HAVING COUNT(EMPLOYEE\_NAME)>3;

+------------+----------------------+

| DEPARTMENT | COUNT(EMPLOYEE\_NAME) |

+------------+----------------------+

| CYBERSEC | 4 |

+------------+----------------------+

1 row in set (0.005 sec)

MariaDB [classroom]> EXIT