Create a database named college

mysql> create database collegeAK;

Query OK, 1 row affected (0.01 sec)

Create a table name student in college database with following structure

roll, name, class, marks, age with respective datatypes and unique constraint on roll, not null on name, marks, check constraint on age check(age>18).

mysql> create table student (roll int unique,name varchar(20) not null,marks int not null,age int check(age>18));

Insert atleast 5 records in student table.

mysql> insert into student (roll,name,marks,age) values (2,"b",85,22),(3,"C",87,23),(4,"D",90,24),(6,"F",91,23);

mysql> select \* from student;

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

| roll | name | marks | age |

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

| 1 | A | 88 | 21 |

| 2 | b | 85 | 22 |

| 3 | C | 87 | 23 |mysql> ALTER table student DROP check student\_chk\_1;

Query OK, 0 rows affected (0.01 sec)

Records: 0 Duplicates: 0 Warnings: 0

| 4 | D | 90 | 24 |

| 6 | F | 91 | 23 |

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

5 rows in set (0.00 sec)

Apply the following MySQL clause to this table.

Alter the constraints to any other constraint.

mysql> alter table student modify roll int primary key;

Query OK, 0 rows affected (0.08 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc student;

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

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

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

| roll | int | NO | PRI | NULL | |

| name | varchar(20) | NO | | NULL | |

| marks | int | NO | | NULL | |

| age | int | YES | | NULL | |

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

4 rows in set (0.00 sec)

Drop all the Constraints

Steps to be followed

1.mysql> use information\_schema;

2.mysql> show tables;

3.mysql> desc TABLE\_CONSTRAINTS ;

4.mysql> select CONSTRAINT\_NAME from TABLE\_CONSTRAINTS where table\_schema = 'collegeAK';

5.mysql> use collegeAK;

6.mysql> ALTER table student DROP check student\_chk\_1;

mysql> ALTER table student DROP primary key;

Query OK, 5 rows affected (0.05 sec)

Records: 5 Duplicates: 0 Warnings: 0

Aggregate Functions:

SUM(), AVG(), COUNT(), MAX(), MIN(), COUNT(),

1. get the total number of students in the student table.

mysql> select count(roll)as TotalSTD from student;

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

| TotalSTD |

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

| 5 |

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

1 row in set (0.01 sec)

2. Show the sum of marks of all students.

mysql> select sum(marks) as TotalSUM from student;

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

| TotalSUM |

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

| 441 |

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

1 row in set (0.01 sec)

3. Display the student who has got maximum marks

mysql> select \* from student where marks=(select max(marks) from student);

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

| roll | name | marks | age |

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

| 6 | F | 91 | 23 |

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

1 row in set (0.01 sec)

4. Display the student who has got minimum marks

mysql> select \* from student where marks=(select min(marks) from student);

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

| roll | name | marks | age |

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

| 2 | b | 85 | 22 |

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

1 row in set (0.00 sec)

5. Show the avg of marks of all students.

mysql> select avg(marks) as Average from student;

+---------+

| Average |

+---------+

| 88.2000 |

+---------+mysql> ALTER table student DROP check student\_chk\_1;

Query OK, 0 rows affected (0.01 sec)

Records: 0 Duplicates: 0 Warnings: 0

1 row in set (0.00 sec)

6. Display min and max age of students.

mysql> select min(age) as MinAGE,max(age) as MaxAGE from student;

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

| MinAGE | MaxAGE |

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

| 21 | 24 |

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

1 row in set (0.00 sec)

Try Group by and Having clauses as explained in session.

Using Like, Distinct, Order By, Between...And

Comparing Nulls, Using IN/Not-In

Group by clause:

mysql> select count(roll) from student group by name;

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

| count(roll) |

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

| 1 |

| 1 |

| 1 |

| 1 |

| 1 |

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

5 rows in set (0.00 sec)

having clause:

mysql> select \* from student having marks > 85;

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

| roll | name | marks | age |

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

| 1 | A | 88 | 21 |

| 3 | C | 87 | 23 |mysql> select distinct(name) from student;

+------+

| name |

+------+

| A |

| b |

| C |

| D |

| F |

+------+

5 rows in set (0.00 sec)

| 4 | D | 90 | 24 |

| 6 | F | 91 | 23 |

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

4 rows in set (0.00 sec)

Like:

mysql> select \* from student where name like '%A';

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

| roll | name | marks | age |

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

| 1 | A | 88 | 21 |

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

1 row in set (0.00 sec)

mysql> select \* from student where name like '%c%';

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

| roll | name | marks | age |

mysql> select min(age) as MinAGE,max(age) as MaxAGE from student;

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

| MinAGE | MaxAGE |

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

| 21 | 24 |

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

1 row in set (0.00 sec)+------+------+-------+------+

| 3 | C | 87 | 23 |

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

1 row in set (0.00 sec)

mysql> select min(age) as MinAGE,max(age) as MaxAGE from student;

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

| MinAGE | MaxAGE |

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

| 21 | 24 |

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

1 row in set (0.00 sec)

mysql> select \* from student where name like '\_c\_';

Empty set (0.00 sec)

Distinct:

mysql> select distinct(name) from student;

+------+

| name |

+------+

| A |

| b |

| C |

| D |

| F |

+------+

5 rows in set (0.00 sec)

Between..And

mysql> select \* from student where marks BETWEEN 85 AND 91;

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

| roll | name | marks | age |

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

| 1 | A | 88 | 21 |

| 2 | b | 85 | 22 |

| 3 | C | 87 | 23 |

| 4 | D | 90 | 24 |

| 6 | F | 91 | 23 |

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

5 rows in set (0.00 sec)

Comparing Nulls, Using IN/Not-In

mysql> select \* from student where marks not between 87 AND 91;

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

| roll | name | marks | age |

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

| 2 | b | 85 | 22 |

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

1 row in set (0.00 sec)

IN:

mysql> select marks from student where marks IN(85,91);

+-------+mysql> select marks from student where marks NOT IN(85,91);

+-------+

| marks |

+-------+

| 88 |

| 87 |

| 90 |

+-------+

3 rows in set (0.00 sec)

| marks |

+-------+

| 85 |

| 91 |

+-------+

2 rows in set (0.00 sec)

NOT-IN:

mysql> select marks from student where marks NOT IN(85,91);

+-------+

| marks |

+-------+

| 88 |

| 87 |

| 90 |

+-------+

3 rows in set (0.00 sec)