SQL QUERY

Structured Query Language

SQL QUERY

1 Creation of table and database ;

MariaDB[CSA]>
Create database CSA ;
• OK Query, 1 row affected (0.001 sec)

Show Databases ;

CSA
mysql
information_schema
Phpmyadmin
test

Use CSA ;
database changed:

MariaDB [CSA]>
Create table student (id int(10), Name varchar(20), Email varchar(20), DOB Varchar(10), Phone bigint(250));
Query OK, 0 rows affected (0.433) Sec

MariaDB [CSA]> desc student ;

field	Type	Null	Key	Default	Extra
id	int(10)	Yes		NULL	
Name	varchar(20)	Yes		NULL	
Email	varchar(20)	Yes		NULL	
DoB	Varchar(20)	Yes		NULL	
Phone	bigint(250)	Yes		NULL	
Dep-id	int(10)	Yes		NULL	

2. Create table with a primary key and another table with Foriegn Key.

Primary Key

```
MariaDB [CSA]> alter table Student add Primary Key (id);
Query OK, 0 rows affected (0.549 sec)

MariaDB [CSA]> desc student ;
```

Field	Type	NULL	Key	Default	Extra
id	int (10)	No	PRI	NULL	
Name	varchar (20)	Yes		NULL	
Email	varchar (20)	Yes		NULL	
DoB	varchar (20)	Yes		NULL	
Phone	big int (250)	Yes		NULL	
Dep-id	int (10)	Yes		NULL	

Foriegn Key

```
MariaDB [CSA]>

Create table department ( Dep_id int (10),
auto_increment Primary Key, Trade varchar(20)
Name varchar (20), id int (10) Foreign Key
(id) references student (id) ;
MariaDB [CSA]> desc department;
```

Field	Type	NULL	Key	Default	Extra
Dep_id	int (10)	No	PRI	NULL	auto-increment
Trade	varchar (20)	Yes		NULL	
Name	varchar (20)	Yes		NULL	
id	int (10)	Yes	MUL	NULL	

3. Insert five rows / tuple in each tables.

MariaDB [CSA]>

```
Insert into student values( 101, 'Ram', 'Ram20@gmail.com',
'02-07-2000', 9810209048, 1001 );
Insert into student values ( 102, 'Ashri', 'Ashri11@gmail.com',
'10-08-1999', 9102017890, 1002 );
Insert into student values (103, 'Amit', 'Amit21@gmail.com',
'20-09-2000', 8120589736, 1003 );
Insert into student values (104, 'Kirti', 'Kirti23@gmail.com',
'19-07-1999', 7840569713, 1004 );
Insert into student values ( 105, 'Aman', 'Aman56@gmail.com',
'27-08-1998', 8120761546, 1005 );
```

Query OK, 5 row affected (0.549 sec).

MariaDB [CSA]> select * from student ;

id	Name	Email	DoB	Phone	Dep-id
101	Ram	Ram20@gmail.com	02-07-2000	9810209048	1001
102	Ashri	Ashri11@gmail.com	10-08-1999	9102017890	1002
103	Amit	Amit21@gmail.com	20-09-2000	8120589736	1003
104	Kirti	Kirti23@gmail.com	19-07-1999	7840569713	1004
105	Aman	Aman56@gmail.com	27-08-1998	8120761546	1005

MariaDB [CSA]>

```
Insert into department values (1001, 'CSA', 'Ram', 101);
Insert into department values (1002, 'CSA', 'Ashri', 102);
Insert into department values (1003, 'CSA', 'Amit', 103);
Insert into department values (1004, 'CSA', 'Kirti', 104);
Insert into department values (1005, 'CSA', 'Aman', 105);
```

MariaDB [CSA]> desc department ;

Select * from department ;

Dep-id	Trade	Name	id
1001	CSA	Ram	101
1002	CSA	Ashri	102
1003	CSA	Amit	103
1004	CSA	Kirti	104
1005	CSA	Aman	105

4. Select all attributes from any table and select some specific attributes from table.

MariaDB [CSA]>

Select * from student where id = 103 ;

id	Name	Email	DOB	Phone	Dep_id
103	Amit	Amit21@gmail.com	20-09-2000	8120589736	1003

MariaDB [CSA]>

Select Name , DOB from student;

Name	DOB
Ram	02-07-2000
Ashri	10-08-1999
Amit	20-09-2000
Kirti	19-07-1999
Aman	27-08-1998

5. Use of distinct Keyword in any column of the table.

MariaDB [CSA]>

```
Select distinct Email from Student;
```

Email
Ram20 @gmail.com
Ashu11@gmail.com
Amit 21 @gmail.com
Kirti 23 @gmail.com
Aman.56 @gmail.com

MariaDB [CSA]>

```
Select count (distinct Name) from Student;
```

count (distinct Name)
5

6. Add and drop an extra column in any table.

Add Column

MariaDB [CSA]>

```
Alter table department add city varchar(20);
```

Query OK, 5 row affected.

MariaDB [CSA]> Select * from department ;

Dep-id	Trade	Name	id	city
1001	CSA	Ram	101	NULL
1002	CSA	Ashvi	102	NULL
1003	CSA	Amit	103	NULL
1004	CSA	Kirti	104	NULL
1005	CSA	Aman	105	NULL

DROP COLUMN

MariaDB [CSA]>

Alter table department drop city ;

Query OK, 0 rows affected (0.071 sec)

MariaDB [CSA]>

Select * from department ;

Dep-id	Trade	Name	id
1001	CSA	Ram	101
1002	CSA	Ashvi	102
1003	CSA	Amit	103
1004	CSA	Kirti	104
1005	CSA	Aman	105

7. Use 'where' clause in table.

MariaDB [CSA]>

```
update department set trade = "fitter"
    where name = "Amit";
Query OK, 1 row affected (0.039 sec).
```

MariaDB [CSA]>

```
Select * from department;
```

Dep_id	Trade	Name	id
1001	CSA	Ram	101
1002	CSA	Ashri	102
1003	fitter	Amit	103
1004	CSA	Kioti	104
1005	CSA	Aman	105

8. Use of 'like' keyword with minimum two condition (wildcard, character)

I st Condition (a%)

MariaDB [CSA]>

```
Select * from department where name like 'a%';
```

Dep_id	Trade	Name	id
1002	CSA	Ashri	102
1003	fitter	Amit	103
1005	CSA	Aman	105

IInd Condition (%am%) :-

MariaDB [CSA] >

Select * from department where name like '%am%';

Dep_id	Trade	Name	id
1001	CSA	Ram	101
1003	fitter	Amit	103
1005	CSA	Aman	105

9. Use of 'and' 'or' 'not' 'in' operators

AND operator.

MariaDB [CSA] >

Select * from department where trade = 'fitter' AND Dep_id = 1003 ;

Dep_id	Trade	Name	id
1003	fitter	Amit	103

OR operators

MariaDB [CSA] >

Select * from department where trade = "fitter" OR Dep_id = 1004 ;

Dep_id	Trade	Name	id
1003	fitter	Amit	103
1004	CSA	Kirti	104

NOT Operator

MariaDB [CSA]>

Select * from department where not Dep_id = 1003;

Dep_id	Trade	Name	id
1001	CSA	Ram	101
1002	CSA	Ashri	102
1004	CSA	Kirti	104
1005	CSA	Aman	105

10. Use of 'order by', 'group by', 'having' statement by KeyWord:

MariaDB [CSA]>

Select * from student ORDER BY Name;

id	Name	Email	DOB	Phone	Dep_id
105	Aman	Aman56@gmail	27-08-1998	8120761546	1005
103	Amit	Amit21@gmail.	20-09-2000	8120589736	1003
102	Ashri	Ashri11@gmail	10-08-1999	9102017890	1002
104	Kirti	Kirti23@gmail	19-07-1999	7840569718	1004
101	Ram	Ram20@gmail	20-07-2000	8102090481	1001

MariaDB [CSA]>

Select * from department group by trade;

Dep_id	trade	Name	id
1001	CSA	Ram	101

MariaDB [CSA]>

Select * from department group by name having name in ('Ashvi', 'Kirti');

Dep-id	trade	Name	id
1002	CSA	Ashvi	102
1004	CSA	Kirti	104

11. Use of aggregate function –

(i) Count ()
(ii) Avg ()
(iii) Sum ()
(iv) min ()
(v) max ()

(i) COUNT ()

MariaDB [CSA]>

Select * COUNT(salary) from department;

COUNT (salary)
5

(ii) AVG ()

MariaDB[CSA]> Select AVG(salary) from department;

AVG(salary)
76000.000

(iii) SUM()

MariaDB [CSA]> Select SUM(salary) from department;

SUM(salary)
380000

(iv) MIN()

MariaDB [CSA]> Select MIN(marks) from department;

MIN(marks)
90

(v) MAX()

MariaDB [CSA]> Select MAX(marks) from department;

MAX(mark
95

Dep_id	trade	Name	id	Salary	marks
1001	CSA	Ram	101	10000	90
1002	CSA	Ashri	102	250000	91
1003	CSA	Amit	103	20000	95
1004	CSA	Kirti	104	50000	90
1005	CSA	Aman	105	50000	95

12. Write the Query using select top clause

MariaDB [CSA]>

```
Select * from department limit 3 ;
```

Dep_id	Trade	Name	id
1001	CSA	Ram	101
1002	CSA	Ashri	102
1003	CSA	Amit	103

13. Change Someone city in any table

Dep_id	Trade	Name	id	City
1001	CSA	Ram	101	Chennai
1002	CSA	Ashri	102	Chennai
1003	CSA	Amit	103	Chennai
1004	CSA	Kirti	104	Chennai
1005	CSA	Aman	105	Chennai

MariaDB [CSA]>

```
update department set City = 'Trichy' where id = 103 ;
```

Dep_id	Trade	Name	id	City
1001	CSA	Ram	101	Chennai
1002	CSA	Ashri	102	Chennai
1003	CSA	Amit	103	Trichy
1004	CSA	Kirti	104	Chennai
1005	CSA	Aman	105	Chennai

14. Delete any tuple from the table.

MariaDB [CSA]> Select * from department ;

Dep_id	Trade	Name	id
1001	CSA	Ram	101
1002	CSA	Ashri	102
1003	CSA	Amit	103
1004	CSA	Kirti	104
1005	CSA	Aman	105

MariaDB [CSA]>

delete from department where id=104 ;

Query OK, 1 row affected

MariaDB [CSA]>

Select * from department ;

Dep_id	Trade	Name	id
1001	CSA	Ram	101
1002	CSA	Ashri	102
1003	CSA	Amit	103
1005	CSA	Aman	105

15. Remove Primary Key from Second table.

MariaDB [CSA]>

desc department ;

field	Type	Null	Key	Default	Extra
Dep-id	int(10)	No	PRI	NULL	
Trade	varchar(20)	Yes		NULL	
Name	varchar(20)	Yes		NULL	
id	int(10)	Yes		NULL	

MariaDB [CSA]>

alter table department drop Primary Key;
Query OK, 4 row affected

MariaDB [CSA]>

desc department ;

field	Type	Null	Key	Default	Extra
Dep-id	int(10)	No		NULL	
Trade	varchar(20)	Yes		NULL	
Name	varchar(20)	Yes		NULL	
id	int(10)	Yes		NULL	