```
create database demo;
use demo;
create table test( id primary key, name varchar(20) not null, age int,  gender varchar(10) );
drop database test;
alter table test add salary int;
SET SQL_SAFE_UPDATES = 0;
```

Data types-> bigint, int, smallint, tinyint, decimal(size of decimal like 10.00), char(5), varchar(20), test
Date and Time -> date, time, year ->(format  YYYY-MM-DD, HH:MM:SS, YYYY)

Constraints are used to specify rule for data in table -> not null, default, unique, primary key
not null -> By default column can hold null value
default -> We can specify default value for column
unique -> We can make constraints unique value for column
primary key -> Primary key uniquely identify the records it is combination of not null +unique

```
insert into test values(1, raj, 20, f);
select * from test;
update test set age = 21 where name='raj';
delete from test where name = 'raj';
truncate table test
```

Distinct (unique value) ->

```
select distinct name from test where age>20;
```

Not null ->

```
select * from test where age is not null;
```

AND, OR, NOT operator->

```
select * from test where name = sujeet and age > 20;
select * from test where name = amit or age >20;
select * from test where not age > 55;
```

Like Operator-> % (zero, one or multiple character), _ (single character)

```
select name from test where name like '_uj%';
select name from test where name like 's%';
select name from test where name not like '3_';
select name from test where name like '[abc]%';
select name from test where name like '[a-f]%';
select name from test where name like '[!abc]%';
```

Order By and Top ->

```
select Top 3 * from test order by age;
select * from test order by age desc;
select * from test order by country, city;
```

Function->

```
select min(price) from test;
select max(price) from test;
select count(*) from test where age > 20;
select avg(price) from test;
select sum(age) from test;
```

IN ->

```
select * from test where country in ( 'india' ,  'usa' );
select * from test where country not in ( 'india' ,  'usa' );
```

Between ->

```
select * from test where age between 20 and 30;
select * from test where age not between 20 and 30;
```

Join ->

```
select * from test1 left join test2 on test1.id= test2.id;
select * from test1 right join test2 on test1.id= test2.id;
select * from test1 inner join test2 on test1.id= test2.id;
select * from test1 full join test2 on test1.id= test2.id;
```

Update join ->

```
update test1 set age=age+10 from test1 join test2 on test1.id=test2.id;
```

Delete join ->

```
delete employee from test1 join test2 on test1.id=test2.id where location ='akluj';
```

Group By->

```
select count(id),country from test group by country;
select count(id),country from test group by country order by count(id) desc;
select count(id),country from test group by country having count(id)>20;
```