Project Development - Database design

Reading Data from Tables:

Filter Data :

1. Where Clause : where clause will provide the condition for the select statement
   Syntax: select Selmect_list from Table_Name where Condition;


```
/* I want to get the details of User whose belongs to Country of USA */
select * from customers where country = 'USA';


 /* whose credit limit is more than 50000 */
 select * from customers where creditLimit >= 50000;

 /* Whose credit limit is between 50000 and 100000 */
 select * from customers where creditlimit between 50000 and 100000;

/* I need the customer names whose country is Germany or USA */
select * from customers where country = 'USA' or country = 'Germany';

/* above query can be replaced with in operator */
select * from customers where country in ('USA','Germany');
```

```sql
/* Order by lastname */
select lastname from employees order by lastname;

/* distinct clause : Unique records */
select distinct lastname from employees order by lastname;

select * from customers;

/* Unique country Names, Unique State names, unique city names */
select distinct country from customers order by country;

select distinct state from customers order by state;

select distinct city from customers order by city;

select * from customers where state is null;

select * from customers where state is not null;
```

Difference between Group by and distinct :
Generally distinct is a special kind of group by clause and the difference is group by sorts the result set and distinct does not sort the result set.

```sql
/* Group by clause */
select state from customers group by state;

select distinct state from customers;
```

```sql
/* Aggregate Functions
    Sum , Avg, Count, max, min
 */

 select * from customers;
 /* Alias Name : alternate name for the table or column */
 select customername as Customer_Name from customers;

 select sum(creditlimit) as SumCredit from customers;

 select Avg(creditlimit) as Average from customers;

/* Count(*) represent the records count in table */
select count(*) as RecordCount from customers;

/* Null values are displayed */
select state from customers;

/* Count(state) which returns the number having the values in the column */
select count(state) from customers;

select max(creditLimit) as MaxCreditLimit from customers;

select Min(creditLimit) as MinCreditLimit from customers;

 /* strings filters like operator */
 /* gives the customer names whose start character is a and rest of characters can anything */
 select * from customers where customername like 'a%';
 /* Gives the records where last character of the customer name is a */
 select * from customers where customername like '%a';
 /* Gives the records the first character is a, second character can be anything
 third character again e
 If you want a character space then we have use underscore symbol
 */
 select * from customers where customername like 'a_e%';
```

```sql
SELECT * FROM CUSTOMERS WHERE CUSTOMERNAME LIKE '%AA%';

SELECT * FROM CUSTOMERS LIMIT 5 ;

SELECT * FROM CUSTOMERS LIMIT 0,10;

/* Union, Union All, intersect and mimus
    Select Statement
    union/union all/intersect/minus
    Select Statement
*/
```

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Union: Allows to combine the two or more results sets of queries into a single result set. Both select statements should have the same type data columns. Union operator will removes the duplicates.

```sql
create table t1_emp(
    Id int auto_increment,
    EmpName varchar(50) not null,
    EmpDesg varchar(50) not null,
    EmpSal int,
    primary key(Id)
);
create table t2_emp(
    Id int auto_increment,
    EmpName varchar(50) not null,
    EmpDesg varchar(50) not null,
    EmpSal int,
    primary key(Id)
);
```

```
insert into t1_Emp(EmpName,EmpDesg,EmpSal) values('Anil','Trainer',1200),('Harsha','Developer',1233),('Dinesh','Developer',1345),('Ajay','Trainer',5567);
select Count(*) from t1_Emp;

insert into t2_Emp(EmpName,EmpDesg,EmpSal) values('Anil','Trainer',1200),('Harsha','Developer',1233),('Dinesh','Developer',1345),('Ajay','Trainer',5567),
('Sandeesh','Junior Developer',123),('SaiTeja','Developer',981),('Ritesh','Junior Developer',234),('Rakesh','Developer',1871);
select Count(*) from t2_Emp;
```

```
select EmpName from t1_Emp
union
select EmpName from t2_Emp;
```

```
select EmpName from t1_Emp
union all
select EmpName from t2_Emp;
```

```
select EmpDesg from t1_Emp
union
select EmpDesg from t2_Emp;
```

```
select EmpDesg from t1_Emp
union all
select EmpDesg from t2_Emp;
```