**SQL Multi Row Function**

**Aggregate Functions**

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select max(last\_name) from customers;

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select avg(MONTHLY\_PAYMENT) from packages;

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select min(last\_name) from customers;

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select count(pack\_id) as num\_internet\_package from packages;

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select count(pack\_id) as num\_package from customers;

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select count(distinct state) as num\_states from customers;

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select count(distinct speed) as num\_distinct\_speed from packages;

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select count(fax) as num\_faxvalues from customers ;

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select count(\*) as num\_faxvalues from customers where fax is null;

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select max(MONTHLY\_DISCOUNT) as max\_discount,min(MONTHLY\_DISCOUNT) as min\_discount,round(avg(MONTHLY\_DISCOUNT)) as avg\_discount from customers;

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select distinct state,count(customer\_id) from customers group by state;

-----12

select distinct speed , avg(monthly\_payment) from Packages group by speed;

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select distinct state , count( distinct city) from Customers group by state;

---14

select SECTOR\_ID ,max( MONTHLY\_PAYMENT) from packages group by SECTOR\_ID;

----15a

select pack\_id, round(avg( monthly\_discount),2) from customers group by pack\_id;

-----15b

select pack\_id, round(avg( monthly\_discount),2) from customers group by pack\_id having pack\_id=22 or pack\_id=13;

------16

select max(MONTHLY\_PAYMENT) as highest\_speed, min(MONTHLY\_PAYMENT) as lowest\_speed ,avg(MONTHLY\_PAYMENT) as average\_monthly\_payment from Packages group by speed;

-----17a

select PACK\_ID ,count(CUSTOMER\_ID)as number\_of\_customers from customers group by pack\_id;

-----17b

select PACK\_ID ,count(CUSTOMER\_ID)as number\_of\_customers from customers group by pack\_id having MONTHLY\_DISCOUNT > 20;

----17c

select PACK\_ID ,count(CUSTOMER\_ID)as number\_of\_customers from customers group by pack\_id having count(CUSTOMER\_ID) > 100;

---18

select state, city, count(CUSTOMER\_ID) as number\_of\_customers from customers group by state , city;

-----19a

select distinct city ,round(avg(MONTHLY\_DISCOUNT),2) from customers group by city;

-----19b

select distinct city ,round(avg(MONTHLY\_DISCOUNT),2) from customers group by city having MONTHLY\_DISCOUNT > 20;

-----20

select state ,min( monthly\_discount) from customers group by state;