Select

1. If we want to see all the data in our table..we use `select * from orders` here orders is our table name
2. We can limit the columns by specifying the columns which we want to see
3. We learned about limiting the rows using **TOP** command in SQL
4. We can use **ORDER BY** command to sort the data using column names

```
select top 5 *
from orders
order by order_date desc
```

100 % ▼

⊞ Results Messages

	row_id	order_id	order_date	ship_date	ship_mode	customer_id	customer_name	segment	country	city	state
1	646	CA-2021-126221	2021-12-30 00:00:00.000	2022-01-05 00:00:00.000	Standard Class	CC-12430	Chuck Clark	Home Office	United States	Columbus	India
2	907	CA-2021-143259	2021-12-30 00:00:00.000	2022-01-03 00:00:00.000	Standard Class	PO-18865	Patrick O'Donnell	Consumer	United States	New York City	New
3	908	CA-2021-143259	2021-12-30 00:00:00.000	2022-01-03 00:00:00.000	Standard Class	PO-18865	Patrick O'Donnell	Consumer	United States	New York City	New
4	909	CA-2021-143259	2021-12-30 00:00:00.000	2022-01-03 00:00:00.000	Standard Class	PO-18865	Patrick O'Donnell	Consumer	United States	New York City	New
5	1297	CA-2021-115427	2021-12-30 00:00:00.000	2022-01-03 00:00:00.000	Standard Class	EB-13975	Erica Bern	Corporate	United States	Fairfield	Calif

5.

6. If we want to see distinct values of column in a table ..we use **DISTINCT**

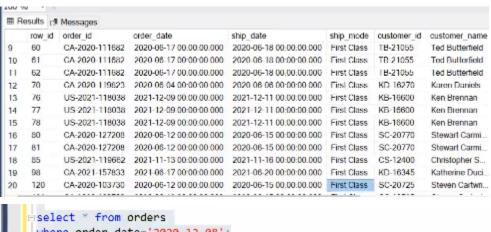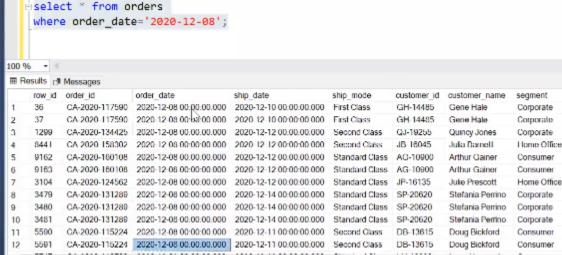7. `select distinct ship_mode from orders` here ship_mode is a column and orders is a

⊞ Results Messages

	ship_mode
1	First Class
2	Same Day
3	Standard Class
4	Second Class

table

```
--to get distinct value of a column
select distinct order_date from orders
order by order_date
```

8. Some commands using distinct
9. If there are 2 rows with same values(duplicates)…then if we use distinct here ..it discards the 2nd row..it gives only one row
10. Distinct helps us to find the duplicate values

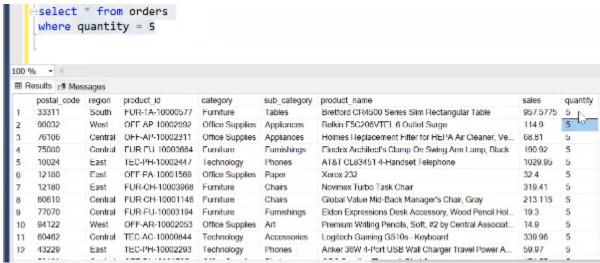Filter(where)

1.
```sql
select * from orders
where ship_mode='First Class'
```
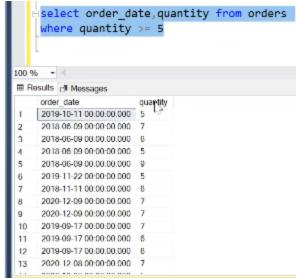
	row_id	order_id	order_date	ship_date	ship_mode	customer_id	customer_name
9	60	CA-2020-111682	2020-06-17 00:00:00.000	2020-06-18 00:00:00.000	First Class	TB-21055	Ted Butterfield
10	61	CA-2020-111682	2020-06-17 00:00:00.000	2020-06-18 00:00:00.000	First Class	TB-21055	Ted Butterfield
11	62	CA-2020-111682	2020-06-17 00:00:00.000	2020-06-18 00:00:00.000	First Class	TB-21055	Ted Butterfield
12	70	CA-2020-119823	2020-06-04 00:00:00.000	2020-06-06 00:00:00.000	First Class	KD-16270	Karen Daniels
13	76	US-2021-118038	2021-12-09 00:00:00.000	2021-12-11 00:00:00.000	First Class	KB-16600	Ken Brennan
14	77	US-2021-118038	2021-12-09 00:00:00.000	2021-12-11 00:00:00.000	First Class	KB-16600	Ken Brennan
15	78	US-2021-118038	2021-12-09 00:00:00.000	2021-12-11 00:00:00.000	First Class	KB-16600	Ken Brennan
16	80	CA-2020-127208	2020-06-12 00:00:00.000	2020-06-15 00:00:00.000	First Class	SC-20770	Stewart Carmi...
17	81	CA-2020-127208	2020-06-12 00:00:00.000	2020-06-15 00:00:00.000	First Class	SC-20770	Stewart Carmi...
18	85	US-2021-119662	2021-11-13 00:00:00.000	2021-11-16 00:00:00.000	First Class	CS-12400	Christopher S...
19	98	CA-2021-157833	2021-08-17 00:00:00.000	2021-08-20 00:00:00.000	First Class	KD-16345	Katherine Duci...
20	120	CA-2020-103730	2020-06-12 00:00:00.000	2020-06-15 00:00:00.000	First Class	SC-20725	Steven Cartwri...

```sql
select * from orders
where order_date='2020-12-08';
```

	row_id	order_id	order_date	ship_date	ship_mode	customer_id	customer_name	segment
1	36	CA-2020-117590	2020-12-08 00:00:00.000	2020-12-10 00:00:00.000	First Class	GH-14485	Gene Hale	Corporate
2	37	CA-2020-117590	2020-12-08 00:00:00.000	2020-12-10 00:00:00.000	First Class	GH-14485	Gene Hale	Corporate
3	1299	CA-2020-134425	2020-12-08 00:00:00.000	2020-12-12 00:00:00.000	Second Class	QJ-19255	Quincy Jones	Corporate
4	8441	CA-2020-158302	2020-12-08 00:00:00.000	2020-12-12 00:00:00.000	Second Class	JB-16045	Julia Barnell	Home Office
5	9162	CA-2020-160108	2020-12-08 00:00:00.000	2020-12-12 00:00:00.000	Standard Class	AG-10900	Arthur Gainer	Consumer
6	9163	CA-2020-160108	2020-12-08 00:00:00.000	2020-12-12 00:00:00.000	Standard Class	AG-10900	Arthur Gainer	Consumer
7	3104	CA-2020-124562	2020-12-08 00:00:00.000	2020-12-12 00:00:00.000	Standard Class	JP-16135	Julie Prescott	Home Office
8	3479	CA-2020-131289	2020-12-08 00:00:00.000	2020-12-14 00:00:00.000	Standard Class	SP-20620	Stefania Perrino	Corporate
9	3480	CA-2020-131289	2020-12-08 00:00:00.000	2020-12-14 00:00:00.000	Standard Class	SP-20620	Stefania Perrino	Corporate
10	3481	CA-2020-131289	2020-12-08 00:00:00.000	2020-12-14 00:00:00.000	Standard Class	SP-20620	Stefania Perrino	Corporate
11	5590	CA-2020-115224	2020-12-08 00:00:00.000	2020-12-11 00:00:00.000	Second Class	DB-13615	Doug Bickford	Consumer
12	5591	CA-2020-115224	2020-12-08 00:00:00.000	2020-12-11 00:00:00.000	Second Class	DB-13615	Doug Bickford	Consumer

2.
3. We can use **where** command with any datatype in SQL..

```sql
select * from orders
where quantity = 5
```

	postal_code	region	product_id	category	sub_category	product_name	sales	quantity
1	33311	South	FUR-TA-10000577	Furniture	Tables	Bretford CR4500 Series Slim Rectangular Table	957.5775	5
2	90032	West	OFF-AP-10002892	Office Supplies	Appliances	Belkin F5C206VTEL 6 Outlet Surge	114.9	5
3	76106	Central	OFF-AP-10002311	Office Supplies	Appliances	Holmes Replacement Filter for HEPA Air Cleaner, Ve...	68.81	5
4	75080	Central	FUR-FU-10003684	Furniture	Furnishings	Electrix Architect's Clamp-On Swing Arm Lamp, Black	190.92	5
5	10024	East	TEC-PH-10002447	Technology	Phones	AT&T CL83451 4-Handset Telephone	1029.95	5
6	12180	East	OFF-PA-10001569	Office Supplies	Paper	Xerox 232	32.4	5
7	12180	East	FUR-CH-10003968	Furniture	Chairs	Novimex Turbo Task Chair	319.41	5
8	60610	Central	FUR-CH-10001146	Furniture	Chairs	Global Value Mid-Back Manager's Chair, Gray	213.115	5
9	77070	Central	FUR-FU-10003194	Furniture	Furnishings	Eldon Expressions Desk Accessory, Wood Pencil Hol...	19.3	5
10	94122	West	OFF-AR-10002053	Office Supplies	Art	Premium Writing Pencils, Soft, #2 by Central Associat...	14.9	5
11	60462	Central	TEC-AC-10000844	Technology	Accessories	Logitech Gaming G510s - Keyboard	339.96	5
12	43229	East	TEC-PH-10002293	Technology	Phones	Anker 36W 4-Port USB Wall Charger Travel Power A...	59.97	5

4.

```
select order_date,quantity from orders
where quantity >= 5
```

100 %

Results | Messages

	order_date	quantity
1	2019-10-11 00:00:00.000	5
2	2018-06-09 00:00:00.000	7
3	2018-06-09 00:00:00.000	6
4	2018-06-09 00:00:00.000	5
5	2018-06-09 00:00:00.000	9
6	2019-11-22 00:00:00.000	5
7	2018-11-11 00:00:00.000	8
8	2020-12-09 00:00:00.000	7
9	2020-12-09 00:00:00.000	7
10	2019-09-17 00:00:00.000	7
11	2019-09-17 00:00:00.000	8
12	2019-09-17 00:00:00.000	6
13	2020-12-08 00:00:00.000	7

5. we can select the columns we need and can apply filter on them
6. Some more examples using **select,where**

```
select order_date,quantity from orders
where quantity >= 5
order by quantity
```

100 %

Results | Messages

	order_date	quantity
1	2019-10-11 00:00:00.000	5
2	2018-06-09 00:00:00.000	5
3	2019-11-22 00:00:00.000	5
4	2020-12-08 00:00:00.000	5
5	2020-12-11 00:00:00.000	5
6	2020-06-17 00:00:00.000	5
7	2020-06-17 00:00:00.000	5
8	2019-04-30 00:00:00.000	5
9	2018-11-26 00:00:00.000	5
10	2018-10-12 00:00:00.000	5
11	2019-10-15 00:00:00.000	5
12	2021-02-02 00:00:00.000	5
13	2020-12-05 00:00:00.000	5

7.

```
select top 5 order_date,quantity
from orders
where quantity >= 5
order by quantity
```

8. here the order of execution is ..first it goes to the table and apply where…and order by quantity is executed..and it selects top 5 records from the those 2 columns
9. Next keyword is between

10.


```sql
select * from orders
where order_date between '2020-12-08' and '2020-12-12'
order by order_date desc
```

	row_id	order_id	order_date	ship_date	ship_mode
76	37	CA-2020-117590	2020-12-08 00:00:00.000	2020-12-10 00:00:00.000	First Class
77	3479	CA-2020-131289	2020-12-08 00:00:00.000	2020-12-14 00:00:00.000	Standard Class
78	3480	CA-2020-131289	2020-12-08 00:00:00.000	2020-12-14 00:00:00.000	Standard Class
79	3481	CA-2020-131289	2020-12-08 00:00:00.000	2020-12-14 00:00:00.000	Standard Class
80	3104	CA-2020-124562	2020-12-08 00:00:00.000	2020-12-12 00:00:00.000	Standard Class
81	9162	CA-2020-160108	2020-12-08 00:00:00.000	2020-12-12 00:00:00.000	Standard Class
82	9163	CA-2020-160108	2020-12-08 00:00:00.000	2020-12-12 00:00:00.000	Standard Class
83	5590	CA-2020-115224	2020-12-08 00:00:00.000	2020-12-11 00:00:00.000	Second Class
84	5591	CA-2020-115224	2020-12-08 00:00:00.000	2020-12-11 00:00:00.000	Second Class
85	5747	CA-2020-113733	2020-12-08 00:00:00.000	2020-12-12 00:00:00.000	Standard Class
86	5748	CA-2020-113733	2020-12-08 00:00:00.000	2020-12-12 00:00:00.000	Standard Class
87	5749	CA-2020-113733	2020-12-08 00:00:00.000	2020-12-12 00:00:00.000	Standard Class

11. Here we select the rows where the order_date is between 2020-12-08 and 2020-12-12(it includes this dates as well)


```sql
select * from orders
where quantity between 3 and 5
order by quantity desc
```

	postal_code	region	product_id	category	sub_category	product_name	sales	quantity	dscount	profit
35	19711	East	OFF-PA-10004285	Office Supplies	Paper	Xerox 1959	20.04	3	0	9.6192
35	92037	West	OFF-ST-10002370	Office Supplies	Storage	Sortilier Multipurpose Personal File Organizer, Black	64.17	3	0	18.6093
35	33178	South	OFF-EN-10004483	Office Supplies	Envelopes	#10 White Business Envelopes,4 1/8 x 9 1/2	37.608	3	0.2	12.6827
35	7090	East	FUR-FU-10003975	Furniture	Furnishings	Eldon Advantage Clear Mats for Low to Medium Pile	129.93	3	0	12.993
35	73120	Central	OFF-AP-10002651	Office Supplies	Appliances	Hoover Upright Vacuum With Dirt Cup	868.59	3	0	251.8911
35	77041	Central	OFF-BI-10004985	Office Supplies	Binders	Ibico Covers for Plastic or Wire Binding Elements	8.9	3	0.8	-12.075
35	90045	West	TEC-PH-10000875	Technology	Phones	Panasonic KX TS3282B Corded phone	196.776	3	0.2	14.7582
35	94122	West	FUR-CH-10004088	Furniture	Chairs	Hon 4070 Series Pagoda Armless Upholstered Stack...	700.152	3	0.2	78.7871
35	19134	East	OFF-AP-10002191	Office Supplies	Appliances	Belkin 8 Outlet SurgeMaster II Gold Surge Protector	143.952	3	0.2	14.3952
35	2148	East	FUR-BO-10003450	Furniture	Bookcases	Bush Westfield Collection Bookcases, Dark Cherry Fi...	173.94	3	0.	13.9152
35	31907	South	OFF-AP-10002734	Office Supplies	Appliances	Holmes Harmony HEPA Air Purifier for 17 x 20 Room	675.12	3	0	290.3016
35	22304	South	FUR-FU-10004587	Furniture	Furnishings	GE General Use Halogen Bulbs, 100 Watts, 1 Bulb p...	62.82	3	0	30.7818

13. Here we selected rows where quantity is between 3 and 5 and order by desc of quantity


```sql
select * from orders
where ship_mode in ('First Class','Same Day');
```

	row_id	order_id	order_date	ship_date	ship_mode	customer_id	customer_name	segment	country	city	state
1	36	CA-2020-117590	2020-12-08 00:00:00.000	2020-12-10 00:00:00.000	First Class	GH-14485	Gene Hale	Corporate	United States	Richardson	Texas
2	37	CA-2020-117590	2020-12-08 00:00:00.000	2020-12-10 00:00:00.000	First Class	GH-14485	Gene Hale	Corporate	United States	Richardson	Texas
3	45	CA-2020-118255	2020-03-11 00:00:00.000	2020-03-13 00:00:00.000	First Class	ON-18715	Odella Nelson	Corporate	United States	Eagan	Minnesota
4	46	CA-2020-118255	2020-03-11 00:00:00.000	2020-03-13 00:00:00.000	First Class	ON-18715	Odella Nelson	Corporate	United States	Eagan	Minnesota
5	56	CA-2020-111682	2020-06-17 00:00:00.000	2020-06-18 00:00:00.000	First Class	TB-21055	Ted Butterfield	Consumer	United States	Troy	New York
6	57	CA-2020-111682	2020-06-17 00:00:00.000	2020-06-18 00:00:00.000	First Class	TB-21055	Ted Butterfield	Consumer	United States	Troy	New York
7	58	CA-2020-111682	2020-06-17 00:00:00.000	2020-06-18 00:00:00.000	First Class	TB-21055	Ted Butterfield	Consumer	United States	Troy	New York
8	59	CA-2020-111682	2020-06-17 00:00:00.000	2020-06-18 00:00:00.000	First Class	TB-21055	Ted Butterfield	Consumer	United States	Troy	New York
9	60	CA-2020-111682	2020-06-17 00:00:00.000	2020-06-18 00:00:00.000	First Class	TB-21055	Ted Butterfield	Consumer	United States	Troy	New York
10	61	CA-2020-111682	2020-06-17 00:00:00.000	2020-06-18 00:00:00.000	First Class	TB-21055	Ted Butterfield	Consumer	United States	Troy	New York
11	62	CA-2020-111682	2020-06-17 00:00:00.000	2020-06-18 00:00:00.000	First Class	TB-21055	Ted Butterfield	Consumer	United States	Troy	New York
12	70	CA-2020-119823	2020-06-04 00:00:00.000	2020-06-06 00:00:00.000	First Class	KD-16270	Karen Daniels	Consumer	United States	Springfield	Virginia

15. If we want to filter a table with a column of 2 values..like here we have selected rows where the column ship_mode has values 'first_class','Same Day'. Basically think like 'OR' gate

16. Some examples

```
select * from orders
where quantity in (3, 5)
order by quantity desc;
```

	postal_code	region	product_id	category	sub_category	product_name	sales	quantity	discount	profit
1	33311	South	FUR-TA-10000577	Furniture	Tables	Bretford CR4500 Series Slim Rectangular Table	957.5775	5	0.45	-383.031
2	90032	West	OFF-AP-10002892	Office Supplies	Appliances	Belkin F5C206VTEL 6 Outlet Surge	114.9	5	0	34.47
3	76106	Central	OFF-AP-10002311	Office Supplies	Appliances	Holmes Replacement Filter for HEPA Air Cleaner, Ve...	68.81	5	0.8	-123.858
4	75080	Central	FUR-FU-10003684	Furniture	Furnishings	Electrix Architect's Clamp-On Swing Arm Lamp, Black	190.92	5	0.6	147.963
5	10024	East	TEC-PH-10002447	Technology	Phones	AT&T CL83451 4-Handset Telephone	1029.95	5	0	298.8855
6	12180	East	OFF-PA-10001569	Office Supplies	Paper	Xerox 232	32.4	5	0	15.552
7	12180	East	FUR-CH-10003868	Furniture	Chairs	Novimex Turbo Task Chair	319.41	5	0.1	7.09800000000001
8	94122	West	OFF-AR-10002053	Office Supplies	Art	Premium Writing Pencils, Soft, #2 by Central Associat...	14.9	5	0	4.172
9	60610	Central	FUR-CH-10001148	Furniture	Chairs	Global Value Mid-Back Manager's Chair, Gray	213.115	5	0.3	-15.2225
10	60462	Central	TEC-AC-10000844	Technology	Accessories	Logitech Gaming G510s - Keyboard	339.96	5	0.2	67.992
11	43229	East	TEC-PH-10002293	Technology	Phones	Anker 36W 4-Port USB Wall Charger Travel Power A...	59.97	5	0.4	-11.994
12	77070	Central	FUR-FU-10003194	Furniture	Furnishings	Eldon Expressions Desk Accessory, Wood Pencil Hol...	19.3	5	0.6	-14.475

17.

18. Here the we retrieved rows whose quantities are either 3 or 5

```
select distinct ship_mode from orders
where ship_mode not in ('First Class','Same Day');
```

ship_mode
Standard Class
Second Class

19.

20. Here we have retrieved the distinct values of ship_mode excluding

```
('First Class','Same Day');

select distinct ship_mode from orders
where ship_mode > 'First Class'
```

	ship_mode
1	Same Day
2	Standard Class
3	Second Class

21. here string datatypes are compared on their ascii values..so we got the data which have ascii value greater than F

22. We can also apply two filters

23.

```
select order_date, ship_mode,segment from orders
where ship_mode = 'First Class' and segment='Consumer'
```

	order_date	ship_mode	segment
1	2020-06-17 00:00:00.000	First Class	Consumer
2	2020-06-17 00:00:00.000	First Class	Consumer
3	2020-06-17 00:00:00.000	First Class	Consumer
4	2020-06-17 00:00:00.000	First Class	Consumer
5	2020-06-17 00:00:00.000	First Class	Consumer
6	2020-06-17 00:00:00.000	First Class	Consumer
7	2020-06-17 00:00:00.000	First Class	Consumer
8	2020-06-04 00:00:00.000	First Class	Consumer
9	2021-06-17 00:00:00.000	First Class	Consumer
10	2020-06-12 00:00:00.000	First Class	Consumer
11	2020-06-12 00:00:00.000	First Class	Consumer
12	2020-06-12 00:00:00.000	First Class	Consumer
13	2020-06-12 00:00:00.000	First Class	Consumer

24. Here we have retrieved order dates whose ship_mode is 'First class' and segment is consumer(Applied two filters) we can achieve this by using and operator

```
select order_date, ship_mode,segment from orders
where ship_mode = 'First Class' or segment='Consumer'
```

100 %

	order_date	ship_mode	segment
1	2020-11-08 00:00:00.000	Second Class	Consumer
2	2020-11-08 00:00:00.000	Second Class	Consumer
3	2019-10-11 00:00:00.000	Standard Class	Consumer
4	2019-10-11 00:00:00.000	Standard Class	Consumer
5	2018-06-09 00:00:00.000	Standard Class	Consumer
6	2018-06-09 00:00:00.000	Standard Class	Consumer
7	2018-06-09 00:00:00.000	Standard Class	Consumer
8	2018-06-09 00:00:00.000	Standard Class	Consumer
9	2018-06-09 00:00:00.000	Standard Class	Consumer
10	2018-06-09 00:00:00.000	Standard Class	Consumer
11	2018-06-09 00:00:00.000	Standard Class	Consumer
12	2021-04-15 00:00:00.000	Standard Class	Consumer
13	2020-12-05 00:00:00.000	Standard Class	Consumer

25.

26. Here we have retrieved order dates where ship_mode is 'First Class' or segment is 'Consumer' ..if any one filter is true..we retrieved that data..this can be achieved using or gate

```
select distinct ship_mode from orders
where ship_mode in ('First Class','Same Day');

select distinct ship_mode from orders
where ship_mode = 'First Class' or ship_mode='Same Day';
```

27.   here this two conditions are same

28. Where clause always check row by row

```
select * from orders
where ship_mode = 'First Class' or ship_mode='Same Day'; --or filter always increase rows

select * from orders where quantity>5 and order_date<'2020-11-08' -- and will decrease
```
29.
30. We can also add more columns to our output..but in reality it does not add any columns to the table..to add more cols in output we use "select *, profit/sales as ratio, profit+sales as total from orders"

31. We can also get current date as a column using getdate() function..it gives us the present time
32.

String matching

1. Pattern matching(like operator)

```sql
select order_id,order_date,customer_name
from orders
where customer_name='Claire Gute'
```

sults | Messages

order_id	order_date	customer_name
CA-2020-152156	2020-11-08 00:00:00.000	Clare Gute
CA-2020-152156	2020-11-08 00:00:00.000	Claire Gute
CA-2021-164098	2021-07-26 00:00:00.000	Clare Gute
US-2019-123918	2019-10-15 00:00:00.000	Claire Gute
US-2019-123918	2019-10-15 00:00:00.000	Clare Gute

2.
3. Here we have retrieved order_id and order_date whose customer name is "Clare Cute"
4. If I want to see all the customers whose name is starting with c

```sql
select order_id,order_date,customer_name
from orders
where customer_name like 'C%'
```

100 %

Results | Messages

	order_id	order_date	customer_name
35	CA-2021-135111	2021-12-28 00:00:00.000	Christopher Schild
36	US-2021-113598	2021-11-13 16:00:00.000	Charlotte Melton
37	US-2021-160835	2021-09-11 00:00:00.000	Cindy Chapma...
38	US-2021-160836	2021-09-11 00:00:00.000	Cindy Chapman
39	US-2021-160836	2021-09-11 00:00:00.000	Cindy Chapman
40	CA-2018-125731	2018-09-10 00:00:00.000	Clay Ludtke
41	CA-2018-125731	2018-09-10 00:00:00.000	Clay Ludtke
42	CA-2018-103492	2018-10-10 00:00:00.000	Craig Molinari
43	CA-2018-103492	2018-10-10 00:00:00.000	Craig Molinari
44	CA-2018-103492	2018-10-10 00:00:00.000	Craig Molinari
45	CA-2018-103492	2018-10-10 00:00:00.000	Craig Molinari
46	CA-2021-119659	2021-04-20 00:00:00.000	Christina VanderZ...
47	CA-2021-119655	2021-04-20 00:00:00.000	Christina VanderZ

5.
6. Here what like operator does is It will find all the customer names whose first character is
   C and % means ..after C we can have anything…basically it is pattern matching

```
--pattern matching like operator
select order_id,order_date,customer_name
from orders
where customer_name like 'Chris%'
```

100 %

Results Messages

	order_id	order_date	customer_name
1	US-2021-119662	2021-11-13 00.00.00.000	Christopher Schild
2	US 2021 100930	2021 04 07 00-00-00.000	Christopher Schild
3	US-2021-100930	2021-04-07 00.00.00.000	Christopher Schild
4	US 2021 100930	2021 04 07 00-00-00 000	Christopher Schild
5	US-2021-100930	2021-04-07 00.00.00.000	Christopher Schild
6	US-2021-100930	2021-04-07 00-00-00 000	Christopher Schild
7	US-2021-145366	2021-12-09 00:00:00.000	Christine Abelman
8	US-2021-145366	2021-12-09 00-00-00.000	Christine Abelman
9	CA-2021-135111	2021-12-28 00:00:00.000	Christopher Schild
10	CA-2021-135111	2021-12-28 00.00.00.000	Christopher Schild
11	CA-2021-119655	2021-04-20 00-00-00 000	Christina VanderZanden
12	CA-2021-119655	2021-04-20 00.00.00.000	Christina VanderZanden
13	CA 2020 144309	2020 12 10 00-00-00 000	Chris McAfee

7. ✔ Query executed successfully.

8. Customers whose name starting with chris and anything after that

```
select order_id,order_date,customer_name
from orders
where customer_name like '%Schild'
```

100 %

Results Messages

	order_id	order_date	customer_name
1	US-2021-119662	2021-11-13 00.00.00.000	Christopher Schild
2	US 2021 100930	2021 04 07 00-00-00 000	Christopher Schild
3	US-2021-100930	2021-04-07 00.00.00.000	Christopher Schild
4	US 2021 100930	2021 04 07 00-00-00 000	Christopher Schild
5	US-2021-100930	2021-04-07 00.00.00.000	Christopher Schild
6	US-2021-100930	2021-04-07 00-00-00 000	Christopher Schild
7	CA-2021-135111	2021-12-28 00:00:00.000	Christopher Schild
8	CA-2021-135111	2021-12-28 00:00:00.000	Christopher Schild
9	CA-2020-133816	2020-05-10 00:00:00.000	Christopher Schild
10	CA-2021-127096	2021-09-15 00:00:00.000	Christopher Schild
11	CA-2021-107293	2021-09-05 00:00:00.000	Christopher Schild
12	CA-2020-140207	2020-11-05 00.00.00.000	Christopher Schild
13	CA 2018 127586	2018 09 26 00-00-00 000	Christopher Schild

9.

10. All the customer names whose first name could be anything and last name is Schild

11.
```sql
select order_id,order_date,customer_name
from orders
where customer_name like '%ven%';
```

	order_id	order_date	customer_name
8	US-2019-161991	2019-09-26 00:00:00.000	Steven Cartwright
9	CA-2018-121789	2018-04-08 00:00:00.000	John Stevenson
10	CA-2018-134726	2018-11-02 00:00:00.000	Steven Ward
11	CA-2018-134726	2018-11-02 00:00:00.000	Steven Ward
12	US-2018-120740	2018-04-15 00:00:00.000	Paul Stevenson
13	US-2018-120740	2018-04-15 00:00:00.000	Paul Stevenson
14	CA-2020-132661	2020-10-23 00:00:00.000	Steven Roelle
15	CA-2019-143602	2019-04-25 00:00:00.000	Jill Stevenson
16	CA-2021-165323	2021-08-17 00:00:00.000	Steven Roelle
17	CA-2021-165323	2021-08-17 00:00:00.000	Steven Roelle
18	US-2019-126214	2019-12-21 00:00:00.000	John Stevenson
19	US-2019-126214	2019-12-21 00:00:00.000	John Stevenson
20	CA-2020-107050	2020-07-14 00:00:00.000	Steven Ward

12. Here we have retrieved customer names whose name starts with anything and ending with anything and it must contain 'ven' in between.
13. Here we have learned 3 variations..first is.. customer name starting with chris and ending with anything
14. Second is… customer name starting with anything and ending with Schild
15. Third is.. a name starts with anything and ends with anything and it must contain 'ven' in between.

```sql
select order_id,order_date,customer_name
from orders
where customer_name like 'A%a';
```

	order_id	order_date	customer_name
1	CA-2018-138100	2018-09-15 00:00:00.000	Alex Avila
2	CA-2018-138100	2018-09-15 00:00:00.000	Alex Avila
3	CA-2021-147039	2021-06-29 00:00:00.000	Alex Avila
4	CA-2021-147039	2021-06-29 00:00:00.000	Alex Avila
5	CA-2019-121391	2019-10-04 00:00:00.000	Alex Avila
6	CA-2018-128055	2018-03-31 00:00:00.000	Alex Avila
7	CA-2018-128055	2018-03-31 00:00:00.000	Alex Avila
8	CA-2020-103982	2020-03-03 00:00:00.000	Alex Avila
9	CA-2020-103982	2020-03-03 00:00:00.000	Alex Avila
10	CA-2020-103982	2020-03-03 00:00:00.000	Alex Avila
11	CA-2020-103982	2020-03-03 00:00:00.000	Alex Avila

16.
17. Customer names starting and ending with A

```sql
select order_id,order_date,customer_name
from orders
where customer_name like 'A%a' or customer_name like 'A%A';

'Alex AvilA'
```

	order_id	order_date	customer_name
1	CA-2018-138100	2018-09-15 00:00:00.000	Alex Avila
2	CA-2018-138100	2018-09-15 00:00:00.000	Alex Avila
3	CA-2021-147039	2021-06-29 00:00:00.000	Alex Avila
4	CA-2021-147039	2021-06-29 00:00:00.000	Alex Avila
5	CA-2019-121391	2019-10-04 00:00:00.000	Alex Avila
6	CA-2018-128055	2018-03-31 00:00:00.000	Alex Avila
7	CA-2018-128055	2018-03-31 00:00:00.000	Alex Avila
8	CA-2020-103982	2020-03-03 00:00:00.000	Alex Avila
9	CA-2020-103982	2020-03-03 00:00:00.000	Alex Avila
10	CA-2020-103982	2020-03-03 00:00:00.000	Alex Avila
11	CA-2020-103982	2020-03-03 00:00:00.000	Alex Avila

18.

19. Example of using 'OR' in like ..here by default SQL is case-insensitive..so to include names with a and A..we have used or

20. We have upper function

```sql
select order_id,order_date,customer_name,upper(customer_name) as name_upper
from orders
```
21.

22. It creates a new column in the output with all the customer name in uppercase

```sql
select order_id,order_date,customer_name,upper(customer_name) as name_upper
from orders
where upper(customer_name) like 'A%A' ;
```

	order_id	order_date	customer_name	name_upper
1	CA-2018-138100	2018-09-15 00:00:00.000	Alex Avila	ALEX AVILA
2	CA-2018-138100	2018-09-15 00:00:00.000	Alex Avila	ALEX AVILA
3	CA-2021-147039	2021-06-29 00:00:00.000	Alex Avila	ALEX AVILA
4	CA-2021-147039	2021-06-29 00:00:00.000	Alex Avila	ALEX AVILA
5	CA-2019-121391	2019-10-04 00:00:00.000	Alex Avila	ALEX AVILA
6	CA-2018-128055	2018-03-31 00:00:00.000	Alex Avila	ALEX AVILA
7	CA-2018-128055	2018-03-31 00:00:00.000	Alex Avila	ALEX AVILA
8	CA-2020-103982	2020-03-03 00:00:00.000	Alex Avila	ALEX AVILA
9	CA-2020-103982	2020-03-03 00:00:00.000	Alex Avila	ALEX AVILA
10	CA-2020-103982	2020-03-03 00:00:00.000	Alex Avila	ALEX AVILA
11	CA-2020-103982	2020-03-03 00:00:00.000	Alex Avila	ALEX AVILA

23.

```
 select order_id,order_date,customer_name
 from orders
 where customer_name like '_l%' ;
```

100 %   ◄
Results   Messages

	order_id	order_date	customer_name
36	CA-2021-123071	2021-12-03 00:00:00.000	Clay Cheatham
37	CA-2020-162236	2020-11-04 00:00:00.000	Elpida Rittenbach
38	CA-2020-162236	2020-11-04 00:00:00.000	Elpida Rittenbach
39	CA-2020-162236	2020-11-04 00:00:00.000	Elpida Rittenbach
40	CA-2018-158470	2018-04-19 00:00:00.000	Allen Goldenen
41	CA-2018-158470	2018-04-19 00:00:00.000	Allen Goldenen
42	CA-2021-127432	2021-01-22 00:00:00.000	Alan Dominguez
43	CA-2021-127432	2021-01-22 00:00:00.000	Alan Dominguez
44	CA-2021-127432	2021-01-22 00:00:00.000	Alan Dominguez
45	CA-2021-127432	2021-01-22 00:00:00.000	Alan Dominguez
46	CA-2020-128613	2020-07-10 00:00:00.000	Allen Armold
47	CA-2020-113243	2020-06-10 00:00:00.000	Olvera Toch
48	CA-2020-113243	2020-06-10 00:00:00.000	Olvera Toch

24.
25. Here we have retrieved customer names ..whose first character can be anything('_') and

    second character must be l and after that it can end with anything `'_l%' ;`
26. Basically _ means there should be one character
27. % means there can be 0 or more characters…but _ means there should be one
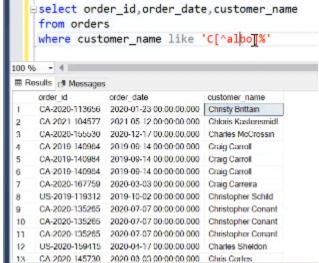   character in the underscore place

```
select order_id,order_date,customer_name
from orders
where customer_name like '_l%' escape '%'

'Ankit% Bansal'
```
28.
29. Try this while practicing

```
 select order_id,order_date,customer_name
 from orders
 where customer_name like 'C[alb]%'
```

100 %   ◄
Results   Messages

	order_id	order_date	customer_name
272	CA-2021-144596	2021-11-06 00:00:00.000	Carol Darley
273	CA-2020-158610	2020-09-19 00:00:00.000	Clytie Kelly
274	CA-2019-151869	2019-09-25 00:00:00.000	Carlos Soltero
275	CA-2019-151869	2019-09-25 00:00:00.000	Carlos Soltero
276	CA-2020-113236	2020-05-26 00:00:00.000	Cathy Prescott
277	CA-2020-113236	2020-05-26 00:00:00.000	Cathy Prescott
278	US-2021-152898	2021-08-11 00:00:00.000	Cassandra Brandow
279	CA-2021-102820	2021-05-07 00:00:00.000	Carlos Soltero
280	CA-2021-107853	2021-05-26 00:00:00.000	Carlos Daly
281	CA-2018-130575	2018-12-14 00:00:00.000	Can Sayre
282	CA-2019-161242	2019-06-01 00:00:00.000	Catherine Glotzba
283	CA-2021-144365	2021-10-24 00:00:00.000	Carlos Soltero

30.
31. Here we are retrieving customer names whose names start C and second character can
    be [a or l or b] and ends with anything

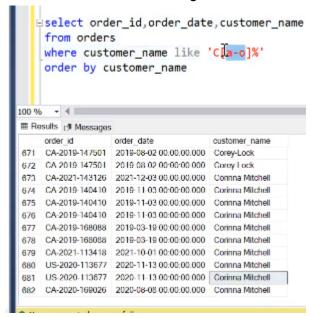32. Here [alb] means the second character can a or l or b..

```sql
select order_id,order_date,customer_name
from orders
where customer_name like 'C[^albo]%'
```

100 %

Results | Messages

	order_id	order_date	customer_name
1	CA-2020-113656	2020-01-23 00:00:00.000	Christy Brittain
2	CA-2021-104577	2021-05-12 00:00:00.000	Chloris Kastensmidt
3	CA-2020-155530	2020-12-17 00:00:00.000	Charles McCrossin
4	CA-2019-140984	2019-09-14 00:00:00.000	Craig Carroll
5	CA-2019-140984	2019-09-14 00:00:00.000	Craig Carroll
6	CA-2019-140984	2019-09-14 00:00:00.000	Craig Carroll
7	CA-2020-167759	2020-03-03 00:00:00.000	Craig Carreira
8	US-2019-119312	2019-10-02 00:00:00.000	Christopher Schild
9	CA-2020-135265	2020-07-07 00:00:00.000	Christopher Conant
10	CA-2020-135265	2020-07-07 00:00:00.000	Christopher Conant
11	CA-2020-135265	2020-07-07 00:00:00.000	Christopher Conant
12	US-2020-159415	2020-04-17 00:00:00.000	Charles Sheldon
13	CA-2020-145730	2020-03-03 00:00:00.000	Chris Carles

33. here the 2nd character can be anything other than albo

34. The last wild character is range

```sql
select order_id,order_date,customer_name
from orders
where customer_name like 'C[a-o]%'
order by customer_name
```

100 %

Results | Messages

	order_id	order_date	customer_name
671	CA-2019-147501	2019-08-02 00:00:00.000	Corey-Lock
672	CA-2019-147501	2019-08-02 00:00:00.000	Corey Lock
673	CA-2021-143126	2021-12-03 00:00:00.000	Corinna Mitchell
674	CA-2019-140410	2019-11-03 00:00:00.000	Corinna Mitchell
675	CA-2019-140410	2019-11-03 00:00:00.000	Corinna Mitchell
676	CA-2019-140410	2019-11-03 00:00:00.000	Corinna Mitchell
677	CA-2019-168088	2019-03-19 00:00:00.000	Corinna Mitchell
678	CA-2019-168088	2019-03-19 00:00:00.000	Corinna Mitchell
679	CA-2021-113418	2021-10-01 00:00:00.000	Corinna Mitchell
680	US-2020-113677	2020-11-13 00:00:00.000	Corinna Mitchell
681	US-2020-113677	2020-11-13 00:00:00.000	Corinna Mitchell
682	CA-2020-169026	2020-08-08 00:00:00.000	Corinna Mitchell

35.

36. Here we have customer names whose name starting with C and 2nd character can be anything in range of a to o and ends with anything.

```sql
select order_id,order_date,customer_name
from orders
where order_id like 'CA-20[1-2]%'
order by customer_name
```

100 %   ▾ ◀

▦ Results ☝ Messages

	order_id	order_date	customer_name
1	CA-2019-150770	2019-05-03 00:00:00.000	Lena Cacioppo
2	CA-2019-150770	2019-05-03 00:00:00.000	Lena Cacioppo
3	CA-2019-150770	2019-05-03 00:00:00.000	Lena Cacioppo
4	CA-2021-154760	2021-01-08 00:00:00.000	Beth Paige
5	CA-2021-113075	2021-09-02 00:00:00.000	Mick Crebagga
6	CA-2020-109953	2020-07-14 00:00:00.000	Raymond Buch
7	CA-2020-109953	2020-07-14 00:00:00.000	Raymond Buch
8	CA-2020-109953	2020-07-14 00:00:00.000	Raymond Buch
9	CA-2021-127397	2021-02-24 00:00:00.000	Erin Smith
10	CA-2021-127397	2021-02-24 00:00:00.000	Erin Smith
11	CA-2018-157546	2018-07-20 00:00:00.000	Roger Demir
12	CA-2018-157546	2018-07-20 00:00:00.000	Roger Demir
13	CA-2021-153843	2021-09-13 00:00:00.000	Shahid Collister

37. another example

Misc

```sql
select *, profit/sales as ratio
from orders
where category='Furniture' and ratio>0
order by ratio desc
```

1.
2. Here we have created a ratio column in the output table..and we can use this col in the order by function and we cannot use this in the where command because
3. Here the order of execution is **from,where,select,order by** ..so order by gets ratio col from select command ..but where command does not know what is ratio…
4. This is because of order of execution