```
#### 4f. BETWEEN - SELECT rows with values in a range
    SELECT * FROM orders
    WHERE order_time BETWEEN '2017-01-01' AND '2017-01-07' ;

    IF dealing with int, no need of ' ' from range
```

```
204 •     SELECT * FROM orders
205           WHERE order_time BETWEEN '2017-01-01' AND '2017-01-07' ;
206
207 •         SELECT * FROM customers
208           WHERE last_name  BETWEEN 'A' AND 'L';
```

| Result Grid | | Filter Rows: | | Edit: | Export/Import: | Wrap Cell Content: |

id	first_name	last_name	gender	phone_number
6	Katie	Armstrong	F	01145787353
7	Michael	Bluth	M	01980289282
9	Buster	Bluth	M	01173456782
11	Lindsay	Bluth	F	01176923804
12	Harry	Johnson	M	NULL
16	Gob	Bluth	M	01176985498
17	George	Bluth	M	01176984303
18	Lucille	Bluth	F	01198773214

customers 88 ✕

4e LIKE

```
SELECT * FROM cutomers WHERE firs_name LIKE '%da%';     - name contains 'da'
    'da%'        - name starts with 'da'
    '%da'        - name ends with 'da'
    '_o_'        - have just one ch on either side of o, EG- Gob
    SELECT title, stock_quantity FROM books WHERE stock_quantity LIKE '____';
    '%\%%';      - to detect '%'
    '%\_%';      = to detect '_'
```

```
13
14 •    SELECT * FROM products
15       WHERE price LIKE '3%';
16
17
18
19
20
```

id	name	price	coffee_origin
► 2	Macchiato	3.00	Colombia
3	Cappuccino	3.50	Costa Rica
4	Latte	3.50	Indonesia
5	Americano	3.25	Ethiopia
6	Flat White	3.50	Indonesia
7	Filter	3.00	Sri Lanka
NULL	NULL	NULL	NULL

```
209

210        --  last name to end with w

211 •      SELECT * FROM customers

212        WHERE last_name LIKE "%w";
```

id	first_name	last_name	gender	phone_number
► 2	Emma	Law	F	01123439899
NULL	NULL	NULL	NULL	NULL

4g. ORDERBY ASC/DESC - by def it is ASC

```
   SELECT * FROM products
   ORDER BY price ASC;  - sim use DESC for descending
```

```
222 •      SELECT| * FROM customers

223        ORDER BY last_name DESC;
```

id	first_name	last_name	gender	phone_number
► 4	Daniel	Williams	M	NULL
23	Toby	West	M	01176009822
3	Mark	Watkins	M	01174592013
5	Sarah	Taylor	F	01176348290
14	John	Taylor	M	NULL
13	John	Smith	M	01174987221
15	Emma	Smith	F	01176984116
21	John	Smith	M	01144473330

customers 07

```
219 •            SELECT * FROM products
220          ORDER BY price ASC;
```

id	name	price
3	BLack	1.50
4	latte	1.50
1	Espresso	3.50
2	Espresso	3.50
5	machi	3.50
6	crude	4.50
NULL	NULL	NULL

EX2.

Exercise 2

1. From the products table, select the name and price of all products with a coffee origin equal to Colombia or Indonesia. Ordered by name from A-Z.

2. From the orders table, select all the orders from February 2017 for customers with id's of 2, 4, 6 or 8.

3. From the customers table, select the first name and phone number of all customers who's last name contains the pattern 'ar'.

1. SELECT name,price FROM products
   WHERE coffe_origin IN (Colombia', 'Indonesia')
   ORDER BY name;

2. SELECT * FROM orders
   WHERE order_time BETWEEN '2017-02-01' AND '2017-02-28';
   AND customer_id IN(2,4,6,8);

```
228 •    SELECT * FROM orders
229      WHERE order_time BETWEEN '2017-02-01' AND '2017-02-28'
230      AND customer_id IN(2,4,6,8);
231
232
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wra

id	product_id	customer_id	order_time
68	5	4	2017-02-10 11:05:34
69	1	2	2017-02-11 08:00:38
70	3	8	2017-02-12 08:08:08
73	5	2	2017-02-13 12:34:56
75	5	4	2017-02-14 09:12:56
78	1	8	2017-02-15 09:27:50
89	4	6	2017-02-20 10:43:39
92	3	2	2017-02-21 11:08:45

orders 98 ×

3. **SELECT first_name, phone_number FROM customers**
    WHERE last_name LIKE '%ar%';

```
232 •    SELECT first_name, phone_number FROM customers
233      WHERE last_name LIKE '%ar%';
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

first_name	phone_number
Chris	01123147789
Katie	01145787353

```
#### 4h. DISTINCT and  COUNT
  how many custmoers order between '2017-02-01' AND '2017-02-0=28'
  SELET COUNT(DISTINCT customers_id) FROM orders
  WHERE order_time BETWEEN '2017-02-01' AND '2017-02-0=28'
```

```
235 •    SELECT COUNT(DISTINCT customer_id) FROM orders
236      WHERE order_time BETWEEN '2017-02-01' AND '2017-02-28';
237
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

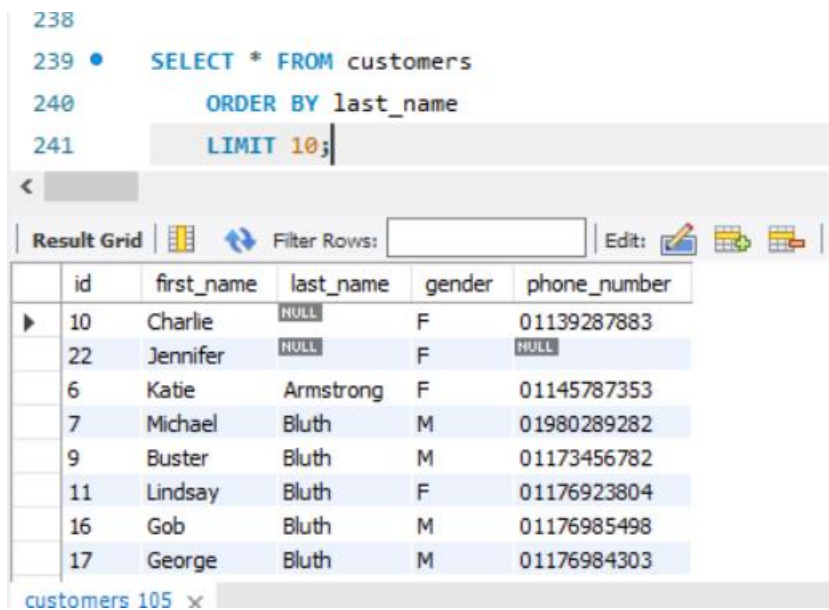| COUNT(DISTINCT customer_id) |
|-----------|
| 23 |

```
#### 4i. LIMIT
    allows to specify a number - EG : How many books do u want to select
    PRINT 5 RECENTLY REALEASED BOOKS.
    SELECT title,released_year FROM books ORDER BY 2 DESC LIMIT 5;

    print first 5-15 customers
    SELECT * FROM cutomers
    LIMIT 10 OFFSET 5
```

```
238
239 •    SELECT * FROM customers
240          ORDER BY last_name
241            LIMIT 10;
```

id	first_name	last_name	gender	phone_number
10	Charlie	NULL	F	01139287883
22	Jennifer	NULL	F	NULL
6	Katie	Armstrong	F	01145787353
7	Michael	Bluth	M	01980289282
9	Buster	Bluth	M	01173456782
11	Lindsay	Bluth	F	01176923804
16	Gob	Bluth	M	01176985498
17	George	Bluth	M	01176984303

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ex3

Exercise 3

1. From the customers table, select distinct last names and order alphabetically from A-Z.

2. From the orders table, select the first 3 orders placed by customer with id 1, in February 2017.

3. From the products table, select the name, price and coffee origin but rename the price to retail_price in the results set.

```
243 •       SELECT DISTINCT last_name FROM customers
244            ORDER BY last_name;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

last_name
NULL
Armstrong
Bluth
Edmonds
Evans
Johnson
Law
Martin

customers 106

```
246 •       SELECT *  FROM orders
247            WHERE order_time BETWEEN '2017-02-01' AND '2017-02-28'
248            AND customer_id =1
249            ORDER BY order_time ASC  -- no need to mention as its by def ASC.
250            LIMIT 3;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell C

id	product_id	customer_id	order_time
56	1	1	2017-02-01 08:10:14
64	1	1	2017-02-07 08:45:10
72	1	1	2017-02-13 08:37:45
NULL	NULL	NULL	NULL

```
250
251 •       SELECT name , price AS retail_price FROM products;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

name	retail_price
Espresso	3.50
Espresso	3.50
BLack	1.50
latte	1.50
machi	3.50
crude	4.50