Pizza Sales Analysis Project On MySQL

1st Step - Entering data into MySQL

//Creating databsase by name of practice_pizza_analysis

```
CREATE SCHEMA practice_pizza_sales_analysis;
use practice_pizza_sales_analysis;
```

//Creating tables using syntax

```
CREATE TABLE pizzas (
	pizza_id VARCHAR(14) NOT NULL,
	pizza_type_id VARCHAR(12) NOT NULL,
	size VARCHAR(3) NOT NULL,
	price DECIMAL(38, 2) NOT NULL
);
 CREATE TABLE orders (
	order_id DECIMAL(38, 0) NOT NULL,
	`date` DATE NOT NULL,
	`time` TIME NOT NULL
);
CREATE TABLE order_details (
	order_details_id DECIMAL(38, 0) NOT NULL,
	order_id DECIMAL(38, 0) NOT NULL,
	pizza_id VARCHAR(14) NOT NULL,
	quantity DECIMAL(38, 0) NOT NULL
);
```

//Creating table using Create a new table in connected sql server icon

```
CREATE TABLE `practice_pizza_sales_analysis`.`pizza_types` (
  `pizza_type_id` VARCHAR(300) NOT NULL,
  `name` VARCHAR(300) NULL,
  `ingredients` VARCHAR(300) NULL,
  `category` VARCHAR(300) NULL,
```

```
PRIMARY KEY (`pizza_type_id`))
ENGINE = InnoDB
DEFAULT CHARACTER SET = utf8mb4;
```

//Load data from .csv file to mysql server using load query:

```
1) load data infile 'orders.csv'
   into table orders
   fields terminated by ','
   ignore 1 rows;
2) load data infile 'order_details.csv'
   into table order_details
   fields terminated by ','
   ignore 1 rows;
3) load data infile 'pizzas.csv'
   into table pizzas
   fields terminated by ','
   ignore 1 rows;
```

I have Load the data in pizza_types table using table import wizard box

It came with double quotes as in the .csv file So I removed double quotes using following UPDATE queries:

1) **To remove left quotes**

```
UPDATE pizza_types
SET ingredients=SUBSTRING(ingredients, 2, LENGTH(ingredients));
```

2) **To remove right quotes**

```
UPDATE pizza_types
SET ingredients=SUBSTRING(ingredients, 1, LENGTH(ingredients)-1);
```

//Assigning Primary keys to each table using ALTER queries as follows:

```
ALTER TABLE `practice_pizza_sales_analysis`.`order_details`
ADD PRIMARY KEY (`order_details_id`);
;
ALTER TABLE `practice_pizza_sales_analysis`.`orders`
ADD PRIMARY KEY (`order_id`);
;
ALTER TABLE `practice_pizza_sales_analysis`.`pizzas`
ADD PRIMARY KEY (`pizza_id`);
;
ALTER TABLE `practice_pizza_sales_analysis`.`pizza_types`
ADD PRIMARY KEY (`pizza_type_id`);
;
```

2nd Step - Analysing data using Queries

1. How many customers do we have each day?

```
with dailycustomers AS (
select count(order_id),count(distinct(`date`))
from orders)
select count(order_id)/count(distinct(`date`)) as average
from orders,dailycustomers;
```

Result Grid | Filter Rows: | Export:

	average
▶	59.6369

2. Are there any peak hours?

```
Create view timezoneview as
Select order_id,`time`,(case
when'00:00:00'<=`time`AND`time`<='00:59:59'then"12 to 1"
when'01:00:00'<=`time`AND`time`<='01:59:59'then"1 to 2"
when'02:00:00'<=`time`AND`time`<='02:59:59'then"2 to 3"
when'03:00:00'<=`time`AND`time`<='03:59:59'then"3 to 4"
when'04:00:00'<=`time`AND`time`<='04:59:59'then"4 to 5"
when'05:00:00'<=`time`AND`time`<='05:59:59'then"5 to 6"
when'06:00:00'<=`time`AND`time`<='06:59:59'then"6 to 7"
when'07:00:00'<=`time`AND`time`<='07:59:59'then"7 to 8"
when'08:00:00'<=`time`AND`time`<='08:59:59'then"8 to 9"
when'09:00:00'<=`time`AND`time`<='09:59:59'then"9 to 10"
when'10:00:00'<=`time`AND`time`<='10:59:59'then"10 to 11"
when'11:00:00'<=`time`AND`time`<='11:59:59'then"11 to 12"
when'12:00:00'<=`time`AND`time`<='12:59:59'then"12 to 13"
when'13:00:00'<=`time`AND`time`<='13:59:59'then"13 to 14"
when'14:00:00'<=`time`AND`time`<='14:59:59'then"14 to 15"
when'15:00:00'<=`time`AND`time`<='15:59:59'then"15 to 16"
when'16:00:00'<=`time`AND`time`<='16:59:59'then"16 to 17"
when'17:00:00'<=`time`AND`time`<='17:59:59'then"17 to 18"
when'18:00:00'<=`time`AND`time`<='18:59:59'then"18 to 19"
when'19:00:00'<=`time`AND`time`<='19:59:59'then"19 to 20"
when'20:00:00'<=`time`AND`time`<='20:59:59'then"20 to 21"
when'21:00:00'<=`time`AND`time`<='21:59:59'then"21 to 22"
when'22:00:00'<=`time`AND`time`<='22:59:59'then"22 to 23"
when'23:00:00'<=`time`AND`time`<='23:59:59'then"23 to 24"
END) as timezone
from orders;
select timezone,count(order_id) from timezoneview
group by timezone
order by 2 desc
limit 6;
```

Result Grid | Filter Rows:

timezone	count(order_id)
12 to 13	2520
13 to 14	2455
18 to 19	2399
17 to 18	2336
19 to 20	2009
16 to 17	1920

3. How many pizzas are typically in an order?

```
create view frequency_pizza as
select order_id,count(quantity) as pizzas_per_order
from order_details
group by order_id;
select pizzas_per_order,count(pizzas_per_order) as
frequency_of_pizzas_per_order
from frequency_pizza
group by pizzas_per_order
order by 2 desc;
select avg(pizzas_per_order) from frequency_pizza;
```

Result Grid | Filter Rows:

pizzas_per_order	frequency_of_pizzas_per_order
1	8201
2	6196
3	3325
4	2888
5	144
8	83
6	75
7	75
12	71
11	69
9	65

Here we manually checked that there are very few outliers which won't affect

The average so much so we applied average formula directly

Result Grid | Filter Rows:

avg(pizzas_per_order)
2.2773

4. Do we have any bestsellers?

```
select sum(sold_pizzas),pizza_types.`name` from pizza_types left join
(select order_details.pizza_id,pizzas.pizza_type_id, count(quantity) as
sold_pizzas
from order_details
left join pizzas on order_details.pizza_id=pizzas.pizza_id
group by order_details.pizza_id
order by 3 desc) as quantity_sold
on pizza_types.pizza_type_id=quantity_sold.pizza_type_id
group by `name`
order by 1 desc
limit 10;
```

Result Grid | Filter Rows:

sum(sold_pizzas)	name
2416	The Classic Deluxe Pizza
2372	The Barbecue Chicken Pizza
2370	The Hawaiian Pizza
2369	The Pepperoni Pizza
2315	The Thai Chicken Pizza
2302	The California Chicken Pizza
1887	The Sicilian Pizza
1887	The Spicy Italian Pizza
1885	The Southwest Chicken Pizza
1850	The Four Cheese Pizza

5. How much money did we make this year?

```
select sum(total_value) from
(select quantity_sold, price, (quantity_sold*price) as total_value from (select
pizza_id,count(quantity) as quantity_sold
from order_details
group by pizza_id)as pizzas_sold left join pizzas
on pizzas_sold.pizza_id=pizzas.pizza_id)as final;
```

Result Grid | Filter Rows:

	sum(total_value)
▶	801944.70

6. Are there any pizzas we should take of the menu, or any promotions we could leverage?

```
select sum(sold_pizzas),pizza_types.`name` from pizza_types left join
(select order_details.pizza_id,pizzas.pizza_type_id, count(quantity) as
sold_pizzas
from order_details
left join pizzas on order_details.pizza_id=pizzas.pizza_id
group by order_details.pizza_id
order by 3 desc) as quantity_sold
on pizza_types.pizza_type_id=quantity_sold.pizza_type_id
group by `name`
order by 1;
```

Result Grid | Filter Rows: | Export

sum(sold_pizzas)	name
480	The Brie Carre Pizza
923	The Mediterranean Pizza
927	The Calabrese Pizza
940	The Spinach Supreme Pizza
957	The Soppressata Pizza