



# MONDAY COFFEE



# Database and Schema

```
1    -- Creating Database
2
3 •  create database monday_coffee;
4
```

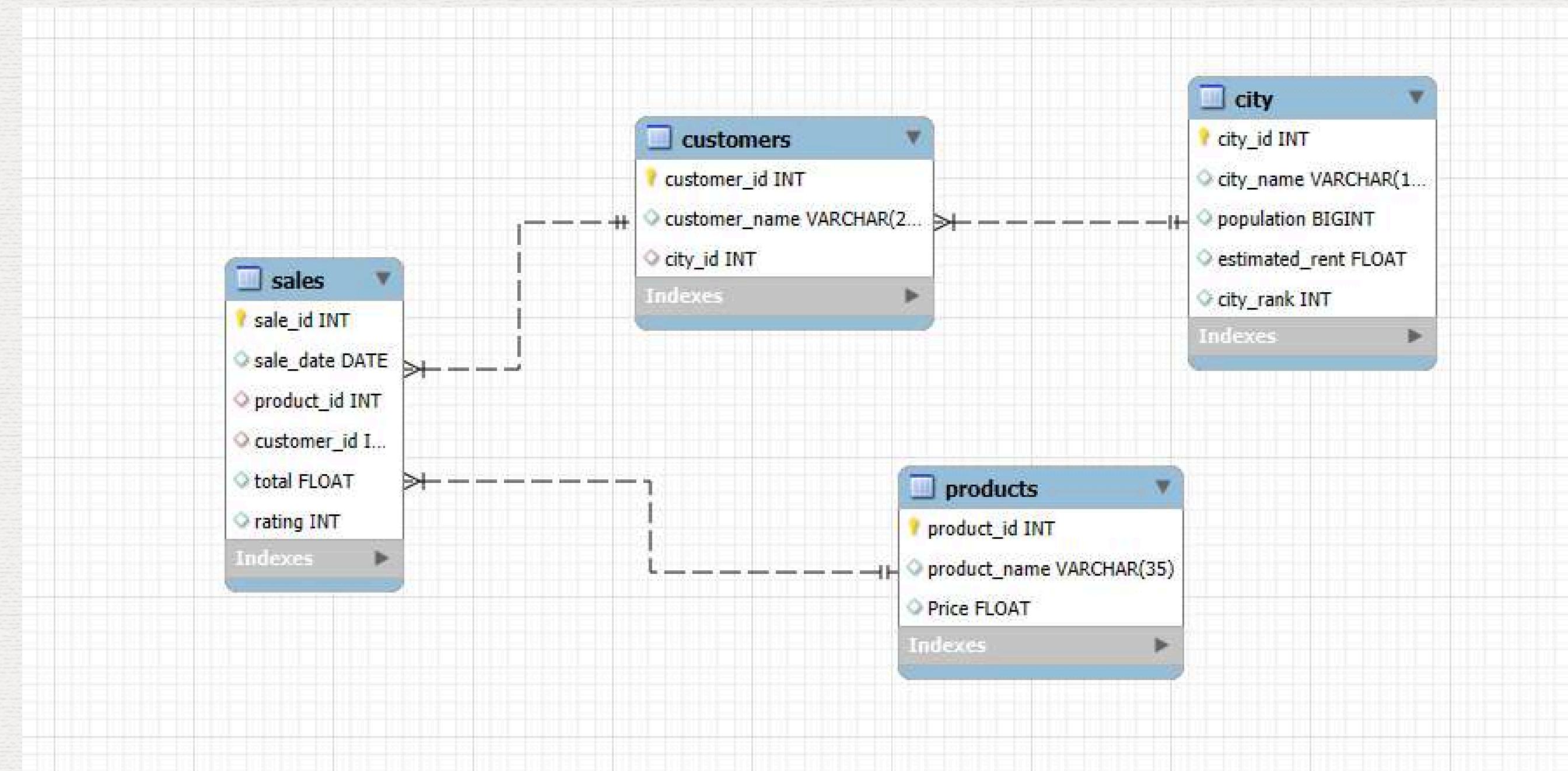
```
5    -- Creating Table Schemas
6
7 •  CREATE TABLE city
8  (
9      city_id INT PRIMARY KEY,
10     city_name VARCHAR(15),
11     population BIGINT,
12     estimated_rent FLOAT,
13     city_rank INT
14  );
15
```

```
16 •  CREATE TABLE customers
17  (
18      customer_id INT PRIMARY KEY,
19      customer_name VARCHAR(25),
20      city_id INT,
21      CONSTRAINT fk_city FOREIGN KEY (city_id) REFERENCES city(city_id)
22  );
23
24 •  CREATE TABLE products
25  (
26      product_id INT PRIMARY KEY,
27      product_name VARCHAR(35),
28      Price float
29  );
30
```

```
31 •  CREATE TABLE sales
32  (
33      sale_id INT PRIMARY KEY,
34      sale_date date,
35      product_id INT,
36      customer_id INT,
37      total FLOAT,
38      rating INT,
39      CONSTRAINT fk_products FOREIGN KEY (product_id) REFERENCES products(product_id),
40      CONSTRAINT fk_customers FOREIGN KEY (customer_id) REFERENCES customers(customer_id)
41  );
42
```



# Model





```
44
45      -- How many people in each city are estimated to consume coffee? (given that 25% of the population does)
46
47 • select city_name, round(population * 0.25/1000000, 2) as consumers_in_millions
48   from city
49   order by population desc;
50
```

	city_name	consumers_in_millions
▶	Delhi	7.75
	Mumbai	5.10
	Kolkata	3.73
	Bangalore	3.08
	Chennai	2.78
	Hyderabad	2.50
	Ahmedabad	2.08
	Pune	1.88
	Surat	1.80
	Jaipur	1.00
	Lucknow	0.95
	Indore	0.83

Delhi having highest number of consumers with 7.75 M followed by Mumbai which is having 5.10 M consumers



```
51      -- What is the total revenue generated across all cities in the last quarter of 2023?  
52  
53 •  select ci.city_name, sum(s.total) as revenue  
54    from sales as s join customers as c on s.customer_id = c.customer_id  
55          join city as ci on ci.city_id = c.city_id  
56    where year(sale_date) = 2023 and quarter(sale_date) = 4  
57    group by ci.city_name  
58    order by revenue desc;  
59
```

	city_name	revenue
▶	Pune	434330
	Chennai	302500
	Bangalore	270780
	Jaipur	248580
	Delhi	238490
	Kanpur	71890
	Mumbai	71340
	Surat	52560
	Kolkata	51180
	Nagpur	45810
	Indore	45670
	Hvderabad	45060

Pune generating the highest revenue as compared to other cities despite having less number of consumers



```
60  -- Count the total number of orders for each product.  
61  
62 • select p.product_name, count(s.sale_id) as total_orders  
63   from products as p  
64   left join  
65     sales as s  
66   on s.product_id = p.product_id  
67   group by p.product_name  
68   order by total_orders desc;
```

	product_name	total_orders
▶	Cold Brew Coffee Pack (6 Bottles)	1326
	Ground Espresso Coffee (250g)	1271
	Instant Coffee Powder (100g)	1226
	Coffee Beans (500g)	1218
	Tote Bag with Coffee Design	776
	Vanilla Coffee Syrup (250ml)	762
	Cold Brew Concentrate (500ml)	312
	Organic Green Coffee Beans (500g)	307
	Coffee Art Print	296
	Flavored Coffee Pods (Pack of 10)	295
	Coffee Drip Bags (10 Bags)	289
	Insulated Travel Mug	273



```
70    -- Average Sales Amount per City and Per Customer in each City.  
71  
72 • select ci.city_name, sum(s.total) as revenue, count(distinct(s.customer_id)) as total_customer,  
73                 round(sum(s.total) / count(distinct(s.customer_id)), 2) as avg_bill  
74   from sales as s join customers as c on s.customer_id = c.customer_id  
75           join city as ci on ci.city_id = c.city_id  
76   group by ci.city_name order by revenue desc;  
77
```

	city_name	revenue	total_customer	avg_bill
▶	Pune	1258290	52	24197.88
	Chennai	944120	42	22479.05
	Bangalore	860110	39	22054.1
	Jaipur	803450	69	11644.2
	Delhi	750420	68	11035.59
	Mumbai	235000	27	8703.7
	Kanpur	213550	35	6101.43
	Surat	176540	27	6538.52
	Kolkata	171460	28	6123.57
	Nagpur	140050	24	5835.42
	Indore	138590	21	6599.52
	Ahmedabad	137690	23	5986.52



```
79    -- Provide a list of cities along with their populations and estimated coffee consumers.
80
81 • with city_table as (
82     select city_name, round((population * 0.25) / 1000000, 2) as coffee_consumers
83     from city
84 ),
85 customers_table as (
86     select ci.city_name, count(distinct c.customer_id) as unique_cx
87     from sales as s
88     join customers as c on c.customer_id = s.customer_id
89     join city as ci on ci.city_id = c.city_id
90     group by ci.city_name
91 )
92 select
93     customers_table.city_name,
94     city_table.coffee_consumers as coffee_consumer_in_millions,
95     customers_table.unique_cx
96     from city_table
97     join customers_table on city_table.city_name = customers_table.city_name;
--
```

	city_name	coffee_consumer_in_millions	unique_cx
▶	Bangalore	3.08	39
	Chennai	2.78	42
	Pune	1.88	52
	Jaipur	1.00	69
	Delhi	7.75	68
	Mumbai	5.10	27
	Hyderabad	2.50	21
	Ahmedabad	2.08	23
	Kolkata	3.73	28
	Surat	1.80	27
	Lucknow	0.95	21
	Kanpur	0.78	35
	Nagpur	0.73	24



```

99      -- What are the top 3 selling products in each city based on sales volume?
100
101 •  select *
102   ⊖ from (
103     select ci.city_name, p.product_name, count(s.sale_id) as total_orders,
104       dense_rank() over ( partition by ci.city_name order by count(s.sale_id) desc
105         ) as product_rank
106   from sales as s
107   join products as p on s.product_id = p.product_id
108   join customers as c on c.customer_id = s.customer_id
109   join city as ci on ci.city_id = c.city_id
110   group by ci.city_name, p.product_name
111 ) as ranked_products
112 where product_rank <= 3;
113

```

	city_name	product_name	total_orders	product_rank
▶	Ahmedabad	Cold Brew Coffee Pack (6 Bottles)	40	1
	Ahmedabad	Coffee Beans (500g)	35	2
	Ahmedabad	Instant Coffee Powder (100g)	26	3
▶	Bangalore	Cold Brew Coffee Pack (6 Bottles)	197	1
	Bangalore	Ground Espresso Coffee (250g)	167	2
	Bangalore	Instant Coffee Powder (100g)	150	3
▶	Chennai	Cold Brew Coffee Pack (6 Bottles)	192	1
	Chennai	Coffee Beans (500g)	181	2
	Chennai	Instant Coffee Powder (100g)	172	3
▶	Delhi	Ground Espresso Coffee (250g)	183	1
	Delhi	Instant Coffee Powder (100g)	170	2
	Delhi	Coffee Beans (500g)	161	3
	Hyderabad	Instant Coffee Powder (100g)	36	1

```

115    -- Calculate the percentage growth (or decline) in sales over different time periods (monthly)
116
117 • with monthly_sales as (
118     select ci.city_name, extract(month from sale_date) as month, extract(year from sale_date) as year,
119         sum(s.total) as total_sale
120     from sales as s
121     join customers as c on c.customer_id = s.customer_id
122     join city as ci on ci.city_id = c.city_id
123     group by ci.city_name, month, year
124     order by ci.city_name, year, month
125 ),
126     growth_ratio as (
127     select city_name, month, year, total_sale as cr_month_sale,
128         lag(total_sale, 1) over ( partition by city_name order by year, month) as last_month_sale
129     from monthly_sales
130 )
131     select city_name, month, year, cr_month_sale, last_month_sale,
132         round((cr_month_sale - last_month_sale) / last_month_sale * 100, 2) as growth_ratio
133     from growth_ratio
134     where last_month_sale is not null;
135

```

	city_name	month	year	cr_month_sale	last_month_sale	growth_ratio
▶	Ahmedabad	2	2023	4100	3750	9.33
	Ahmedabad	3	2023	3050	4100	-25.61
	Ahmedabad	4	2023	4040	3050	32.46
	Ahmedabad	5	2023	2550	4040	-36.88
	Ahmedabad	6	2023	2900	2550	13.73
	Ahmedabad	7	2023	2800	2900	-3.45
	Ahmedabad	8	2023	4300	2800	53.57
	Ahmedabad	9	2023	8250	4300	91.86
	Ahmedabad	10	2023	10950	8250	32.73
	Ahmedabad	11	2023	21250	10950	94.06
	Ahmedabad	12	2023	11360	21250	-46.54
	Ahmedabad	1	2024	12090	11360	6.43
	Ahmedabad	2	2024	10900	12090	-9.84
	Ahmedabad	3	2024	14000	10900	28.44
	Ahmedabad	4	2024	3950	14000	-71.79
	Ahmedabad	5	2024	5250	3950	32.91
	Ahmedabad	6	2024	3300	5250	-37.14
	Ahmedabad	7	2024	2700	3300	-18.18

```
136    -- How many unique customers are there in each city who have purchased coffee products?  
137  
138 • select ci.city_name, count(distinct c.customer_id) as unique_cx  
139   from city as ci left join customers as c on c.city_id = ci.city_id  
140   join sales as s on s.customer_id = c.customer_id  
141   where s.product_id in (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14)  
142   group by ci.city_name;  
143
```

	city_name	unique_cx
►	Ahmedabad	23
	Bangalore	39
	Chennai	42
	Delhi	68
	Hyderabad	21
	Indore	21
	Jaipur	69
	Kanpur	35
	Kolkata	28
	Lucknow	21
	Mumbai	27
	Nagpur	24
	Pune	52
	Surat	27



THANK  
YOU.