COURSE PROJECT :- Terpbuy

PART - I -- SQL Queries :-

Query #1

How many rows of data are stored for each table in the database? List the name of each table followed by the number of rows it has.

```
SELECT table_name AS "Table Name",table_rows AS "Number of Rows"
FROM  information_schema.tables
WHERE table_schema = 'Terpbuy';
/*Aditya Kumar Gupta - 21/09/2023  */
```

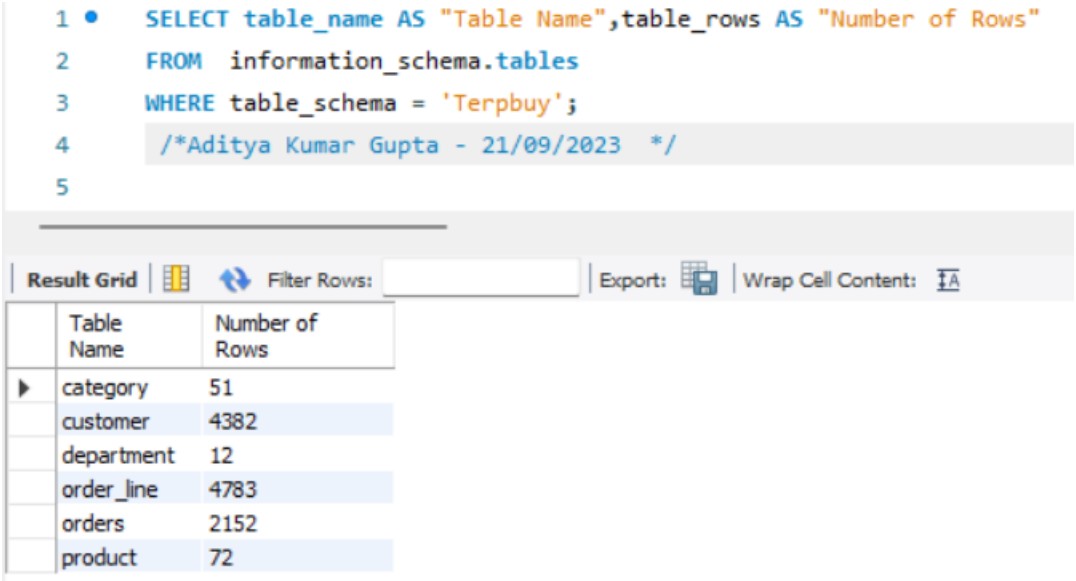


Table Name	Number of Rows
category	51
customer	4382
department	12
order_line	4783
orders	2152
product	72

Query #2

Which products are considered high-priced products? A high-priced product has a price exceeding $100.00. List the names and prices of the high-priced products.

SELECT product_name , product_price AS High_Priced_Products

FROM product

WHERE > 100.00;

/*Aditya Kumar Gupta - 21/09/2023 */

```
5 •   SELECT product_name  , product_price AS High_Priced_Products
6     FROM product
7     WHERE product_price > 100.00;
8      /*Aditya Kumar Gupta - 21/09/2023  */
9
```

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

product_name	High_Priced_Products
Nike Mens CJ Elite 2 TD Football Cleat	129.99
Diamondback Womens Serene Classic Comfort Bi	299.98
Field & Stream Sportsman 16 Gun Fire Safe	399.98
Pelican Sunstream 100 Kayak	199.99
Web Camera	452.04
Childrens heaters	357.10
Dell Laptop	1500.00
Industrial CONSUMER electronics	252.88
Porcelain crafts	461.48
DVDs	164.38
Lawn mower	532.58
First aid kit	293.04
Mens gala suit	210.85
Rock music	260.65
Smart watch	327.75

Query #3

List all orders placed by customers in the state of Florida. Note: The state abbreviation for Florida is 'FL'. Include the customers' first names, last names, city, and segment, along with the order ID and order date.

SELECT first_name , last_name , city , segment , order_id , order_date

FROM customer c

INNER JOIN orders o ON c.customer_id = o.customer_id

WHERE c.state = 'FL';

/*Aditya Kumar Gupta - 21/09/2023 */

```
10 •  SELECT first_name , last_name , city , segment , order_id , order_date
11    FROM customer c
12    INNER JOIN orders o ON c.customer_id = o.customer_id
13    WHERE c.state = 'FL';
14     /*Aditya Kumar Gupta - 21/09/2023  */
```

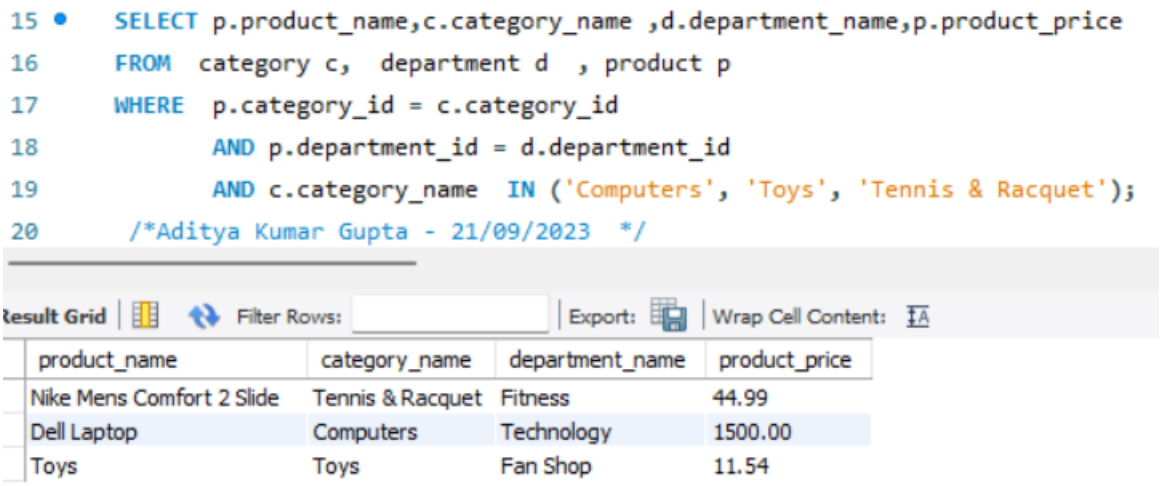
Result Grid | Filter Rows: | Export: | Wrap Cell Content:

first_name	last_name	city	segment	order_id	order_date
Laura	Smith	Winter Park	CORPORATE	20366	2018-10-24
Linda	Murray	Pompano Beach	CORPORATE	20428	2018-10-25
Mary	Smith	Tallahassee	CORPORATE	20492	2018-10-26
Mary	Morrison	Brandon	HOME_OFFICE	20745	2018-10-29
Jose	Smith	Miami	CORPORATE	20877	2018-10-31
Patricia	Smith	Fort Lauderdale	CORPORATE	21239	2018-11-06
Mary	Harris	Miami	CORPORATE	21278	2018-11-06
Mary	Weaver	Miami	CONSUMER	22082	2018-11-18
Mary	Holmes	Pompano Beach	CONSUMER	22188	2018-11-19
James	Trevino	Miami	CONSUMER	22219	2018-11-20
Katherine	Rogers	Hollywood	CONSUMER	22337	2018-11-22
Mary	Shah	Winter Park	HOME_OFFICE	22999	2018-12-01
Mary	Smith	Hollywood	CONSUMER	23000	2018-12-01
Michael	Holloway	Fort Lauderdale	HOME_OFFICE	23072	2018-12-02
Rose	Case	Brandon	CONSUMER	23244	2018-12-05

Query #4

List all products that fall in one of the following categories: 'Computers', 'Toys', 'Tennis & Racquet'. Include the products' names, category, department, and price.

```
SELECT p.product_name, c.category_name , d.department_name, p.product_price
FROM   category c,   department d  , product p
WHERE   p.category_id = c.category_id
    AND p.department_id = d.department_id
    AND c.category_name  IN ('Computers', 'Toys', 'Tennis & Racquet');
/*Aditya Kumar Gupta - 21/09/2023  */
```



```
15 •   SELECT p.product_name,c.category_name ,d.department_name,p.product_price
16     FROM  category c,  department d  , product p
17     WHERE  p.category_id = c.category_id
18           AND p.department_id = d.department_id
19           AND c.category_name  IN ('Computers', 'Toys', 'Tennis & Racquet');
20      /*Aditya Kumar Gupta - 21/09/2023  */
```

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

product_name	category_name	department_name	product_price
Nike Mens Comfort 2 Slide	Tennis & Racquet	Fitness	44.99
Dell Laptop	Computers	Technology	1500.00
Toys	Toys	Fan Shop	11.54

Query #5

TerpBuy is considering reducing its product offerings. Which products have not yet been sold? Include the name, category, and department for each such product.

SELECT p.product_name,c.category_name, d.department_name

FROM product p

LEFT JOIN category c ON p.category_id = c.category_id

LEFT JOIN department d ON p.department_id = d.department_id

LEFT JOIN order_line ol ON p.product_id = ol.product_id

WHERE ol.product_id IS NULL;

/*Aditya Kumar Gupta - 21/09/2023 */

```
25 •    SELECT p.product_name,c.category_name, d.department_name
26      FROM product p
27      LEFT JOIN category c ON p.category_id = c.category_id
28      LEFT JOIN department d ON p.department_id = d.department_id
29      LEFT JOIN order_line ol ON p.product_id = ol.product_id
30      WHERE ol.product_id IS NULL;
31      /*Aditya Kumar Gupta - 21/09/2023  */
32
```

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

product_name	category_name	department_name

Result 2 ×

Query #6

List the names of all cities from where orders are shipped. Also, for such cities, find the number of orders for which shipping was delayed. Sort the list of cities in order from the highest to the least number of shipping orders.

SELECT order_city, count(order_id) AS total

FROM orders

WHERE actual_shipping_days > scheduled_shipping_days

GROUP BY order_city

ORDER BY total DESC;

/*Aditya Kumar Gupta - 21/09/2023 */

```
39 •  SELECT   order_city, count(order_id) AS  total
40    FROM orders
41    WHERE actual_shipping_days > scheduled_shipping_days
42    GROUP BY  order_city
43    ORDER BY  total DESC;
44    /*Aditya Kumar Gupta - 21/09/2023  */
45
```

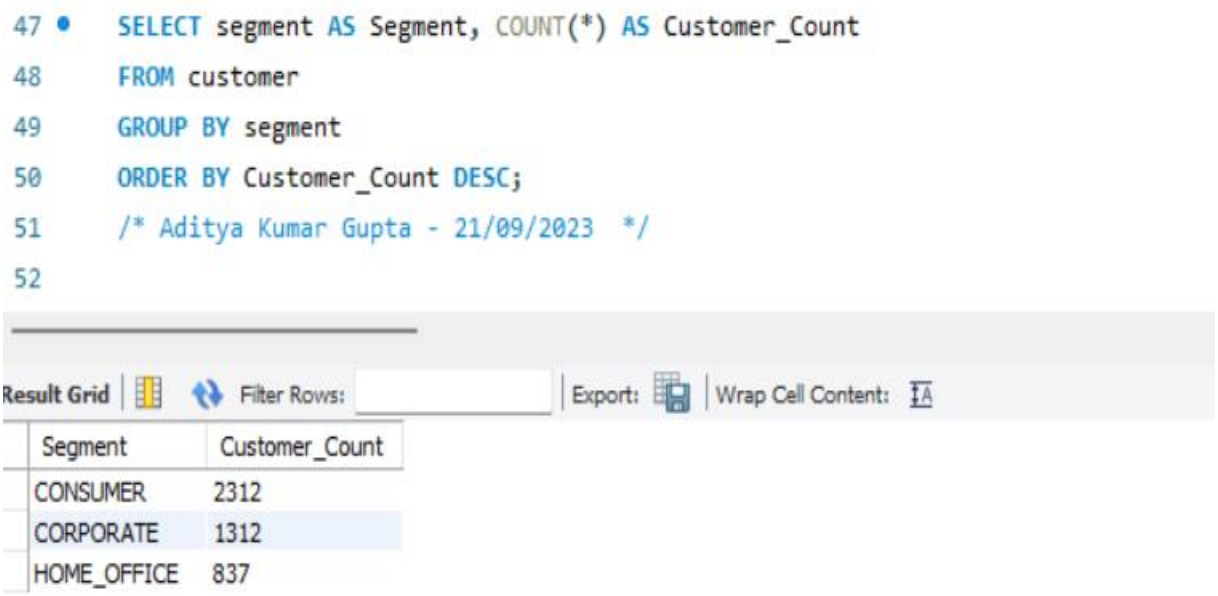
Result Grid | Filter Rows: | Export: | Wrap Cell Content:

order_city	total
Bangalore	51
Mumbai	45
Pune	41
Delhi	37
Chennai	32
Surat	31
Visakhapatnam	30
Hyderabad	29
Gorakhpur	27
Ajmer	26
Agra	25
Kanpur	24
Jaipur	24
Aurangabad	21

Query #7

How many customers are there in each segment? Show the most popular segment at the top of the result. Incorporate a column alias in the result.

```
SELECT segment AS Segment, COUNT(*) AS Customer_Count
FROM customer
GROUP BY segment
ORDER BY Customer_Count DESC;
/* Aditya Kumar Gupta - 21/09/2023  */
```



Query #8

How many orders were placed in the first quarter of 2021? Note: A quarter consists of three months. Incorporate a column alias in the result. You can refer to the documentation on date functions provided here.

SELECT COUNT(*) AS Orders_placed_in1st_quarter

FROM orders

WHERE order_date >= '2021-01-01' AND order_date <= '2021-03-31';

/* Aditya Kumar Gupta - 21/09/2023 */

```
53 •  SELECT COUNT(*) AS Orders_placed_in1st_quarter
54    FROM orders
55    WHERE order_date >= '2021-01-01' AND order_date <= '2021-03-31';
56    /* Aditya Kumar Gupta - 21/09/2023  */
57
```

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

Orders_placed_in1st_quarter
362

Result 14

Query #9

List in alphabetical order all states supporting multiple customer segments.

SELECT state, COUNT(DISTINCT segment) AS segment_count

FROM customer

GROUP BY state

HAVING COUNT (DISTINCT segment) > 1

ORDER BY state;

/* Aditya Kumar Gupta - 21/09/2023 */

```
63 •  SELECT state,COUNT(DISTINCT segment) AS segment_count
64    FROM customer
65    GROUP BY state
66    HAVING COUNT(DISTINCT segment) > 1
67    ORDER BY state;
68    /* Aditya Kumar Gupta - 21/09/2023 */
```

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

state	segment_count
AR	2
AZ	3
CA	3
CO	3
CT	3
DC	3
DE	3
FL	3
GA	3
HI	3
IA	3
ID	2
IL	3
IN	3

Query #10

To help the commercial sales department with its marketing, find all customers in the corporate segment who have not placed any orders. Include each customers' first name, last name, street, city, state, and zip code. Sort the results by the last name first and then by the first name.

SELECT c.last_name,c.first_name,c.street,c.city,c.state,c.zipcode

FROM customer c

LEFT JOIN orders o

ON c.customer_id = o.customer_id

WHERE c.segment = 'Corporate' AND o.customer_id IS NULL

ORDER BY c.last_name , c.first_name;

/* Aditya Kumar Gupta - 21/09/2023 */

```
71 •  SELECT c.last_name,c.first_name,c.street,c.city,c.state,c.zipcode
72    FROM customer c
73    LEFT JOIN orders o
74    ON c.customer_id = o.customer_id
75    WHERE c.segment = 'Corporate'AND o.customer_id IS NULL
76    ORDER BY c.last_name,c.first_name;
77    /* Aditya Kumar Gupta - 21/09/2023 */
```

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

last_name	first_name	street	city	state	zipcode
	BlueOneal	9279 Quaking Key	Caguas	PR	00725
Acosta	Peter	1761 Noble Barn Heath	Caguas	PR	00725
Adams	Eliana	7592 Heather Circuit	Detroit	MI	48221
Adkins	Ryan	1855 Silver Manor	East Brunswick	NJ	08816
Adkins	Sarah	2264 Silent Freeway	Salt Lake City	UT	84119
Alexander	Ethan	4155 Bright Deer Line	La Crosse	WI	54601
Allen	Gregory	1906 Amber Dale	Morristown	NJ	07960
Alvarez	Aphrodite	6179 Silver Alley	Caguas	PR	00725
Anderson	Mary	6395 Colonial Berry Ledge	Caguas	PR	00725
Anderson	Samantha	6715 Blue Run	San Jose	CA	95124
Andrews	Mary	2912 Hidden Acres	Laredo	TX	78040
Arnold	Judy	3836 Stony Point	Caguas	PR	00725
Avila	Reagan	8987 Foggy Hill	Wayne	NJ	07470
Ayala	Kerry	409 Tawny Range	Brooklyn	NY	11236

Query #11

There has been a recall of the product Nike Mens Free 5.0+ Running Shoe. TerpBuy would have to offer a discount coupon to all customers who purchased this product. Find all orders that included this product as a part of the purchase. For all such orders, list the customers' first names, last names, street, state, zip code, and order date. Each customer can be offered only one discount coupon. Hence, do not list the same customer more than once.

SELECT DISTINCT first_name,last_name,street,state,zipcode,order_date

FROM product p

INNER JOIN order_line ol ON ol.product_id = p.product_id

INNER JOIN orders o ON o.order_id = ol.order_id

INNER JOIN customer c ON c.customer_id = o.customer_id

WHERE product_name = 'Nike Mens Free 5.0+ Running Shoe';

/* Aditya Kumar Gupta - 21/09/2023 */

```
79 •  SELECT DISTINCT first_name,last_name,street,state,zipcode,order_date
80    FROM product p
81    INNER JOIN order_line  ol ON  ol.product_id = p.product_id
82    INNER JOIN orders  o ON o.order_id = ol.order_id
83    INNER JOIN customer c  ON c.customer_id = o.customer_id
84    WHERE product_name = 'Nike Mens Free 5.0+ Running Shoe';
85    /* Aditya Kumar Gupta - 21/09/2023 */
```

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

first_name	last_name	street	state	zipcode	order_date
Mary	Reynolds	4823 Broad Route	OR	97045	2018-10-23
Mary	Smith	3385 Cotton Wharf	CA	95051	2018-10-24
Wayne	Hardy	4132 Broad Gate Lane	TX	75150	2018-10-24
Nicholas	Smith	603 Green Sky Promenade	LA	70072	2018-10-24
Louis	Bishop	5192 Foggy Elk Village	PR	00725	2018-10-24
Jonathan	Costa	849 Noble Apple Private	CA	91402	2018-10-25
Mary	Smith	5340 Quaking Panda Forest	FL	32308	2018-10-26
Mary	Lloyd	6035 Foggy Link	PR	00725	2018-10-26
Justin	Smith	338 Heather Orchard	AZ	85029	2018-10-29
Virginia	Sanders	1801 Jagged Dale Park	TX	78704	2018-10-30
Robert	Smith	1987 Indian Autumn Swale	CO	80631	2018-10-31
Dorothy	Hudson	4992 Jagged Forest Subdi...	IL	60613	2018-10-31
Douglas	Joseph	7308 Honey Autumn Range	TX	78227	2018-11-01
Mary	Marquez	9176 Shady Barn Jetty	PR	00725	2018-11-02

Query #12

Premium customers are those customers who have placed orders with order amounts greater than the average order amount. For each customer, find the first and last names, and the order amount for all orders that exceeded the average order amount.

```
SELECT first_name  , last_name, SUM(ol.total_price) AS total_order_amount
FROM customer c
INNER JOIN orders o ON c.customer_id = o.customer_id
INNER JOIN order_line ol ON o.order_id = ol.order_id
GROUP BY c.customer_id,c.first_name,c.last_name
HAVING SUM(ol.total_price) > (
      SELECT AVG(total_price)
      FROM order_line
   );
/* Aditya Kumar Gupta - 21/09/2023 */
```

```sql
SELECT first_name,last_name, SUM(ol.total_price) AS total_order_amount
FROM customer c
INNER JOIN orders o ON c.customer_id = o.customer_id
INNER JOIN order_line ol ON o.order_id = ol.order_id
GROUP BY c.customer_id,c.first_name,c.last_name
HAVING SUM(ol.total_price) > (
        SELECT AVG(total_price)
        FROM order_line
    );
/* Aditya Kumar Gupta - 21/09/2023 */
```

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

first_name	last_name	total_order_amount
Phillip	Mcgee	399.98
Mary	Reynolds	859.90
Mary	Smith	549.98
David	Smith	1109.85
Henry	Maldonado	385.93
Mary	Smith	329.97
Mary	Hill	799.96
Wayne	Hardy	499.95
Nicholas	Smith	899.89
Louis	Bishop	699.96
James	Smith	1659.91