SQL Data Analysis - Task 3

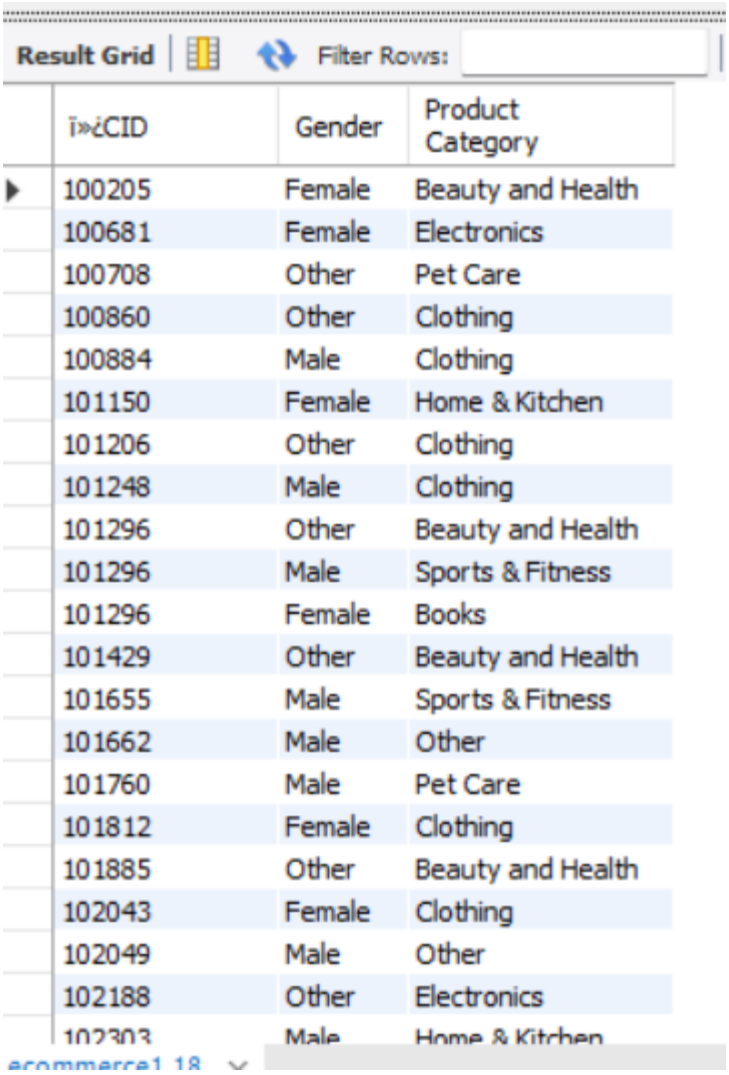
This report contains SQL queries and results to analyze an e-commerce dataset using SELECT, WHERE, GROUP BY, JOIN, subqueries.

Query 1: Basic SELECT + WHERE + ORDER BY

Customers from Bangalore

```
SELECT
	ï»¿CID,
	  Gender,
	  `Product Category`
FROM ecommerce1
WHERE Location = "Bangalore"
ORDER BY ï»¿CID;
```

Output:



Result Grid | Filter Rows:

ï»¿CID	Gender	Product Category
100205	Female	Beauty and Health
100681	Female	Electronics
100708	Other	Pet Care
100860	Other	Clothing
100884	Male	Clothing
101150	Female	Home & Kitchen
101206	Other	Clothing
101248	Male	Clothing
101296	Other	Beauty and Health
101296	Male	Sports & Fitness
101296	Female	Books
101429	Other	Beauty and Health
101655	Male	Sports & Fitness
101662	Male	Other
101760	Male	Pet Care
101812	Female	Clothing
101885	Other	Beauty and Health
102043	Female	Clothing
102049	Male	Other
102188	Other	Electronics
102303	Male	Home & Kitchen

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Query 2: GROUP BY + Aggregates (SUM, AVG)

Avg amount and Discount on each Category

```sql
SELECT `Product Category`,
        ROUND(AVG(`Gross Amount`),2) AS Avg_amount,
        ROUND(AVg(`Discount Amount (INR)`),2) AS Avg_discount
FROM ecommerce1
GROUP BY `Product Category`
ORDER BY Avg_amount;
```

Output:

Result Grid | Filter Rows:

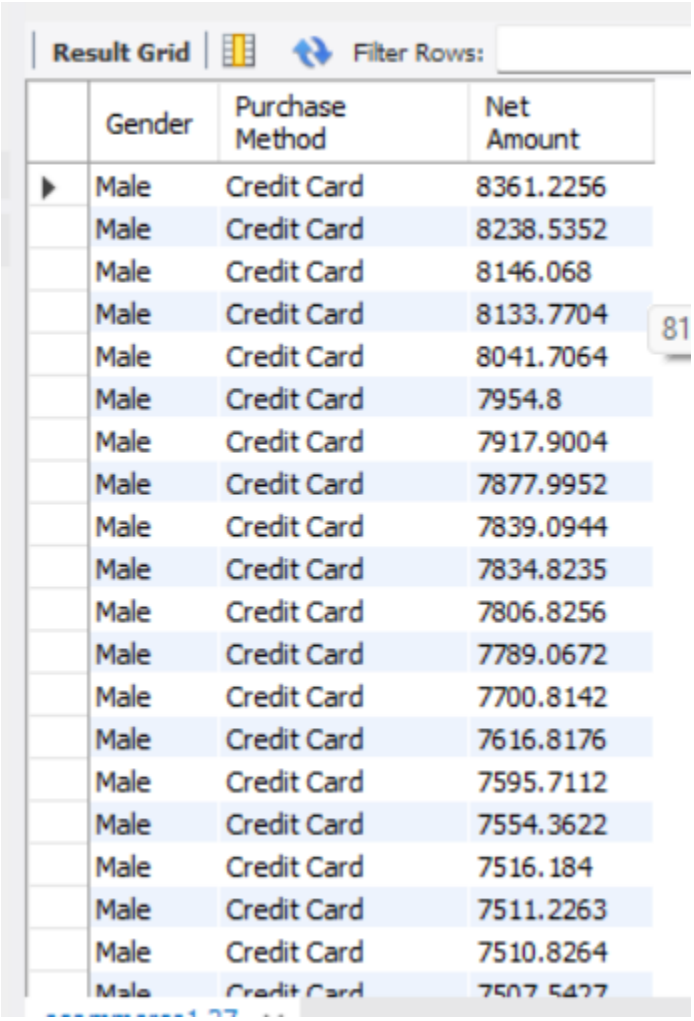
Product Category	Avg_amount	Avg_discount
Clothing	2984.32	137.83
Other	2999.75	139.49
Pet Care	3000.3	134.36
Electronics	3001.3	136.41
Books	3009.47	137.34
Home & Kitchen	3034.03	138.68
Beauty and Health	3038.9	136.17
Sports & Fitness	3039.92	135.5
Toys & Games	3067.44	139.49

Query 3: AND, OR Functions

All male customers who used Credit Card, ordered by net amount (high to low)

```sql
SELECT Gender,
        `Purchase Method`,
        `Net Amount`
FROM ecommerce1
WHERE Gender = 'Male'
  AND `Purchase Method` = 'Credit Card'
ORDER BY `Net Amount` DESC;
```

Output:



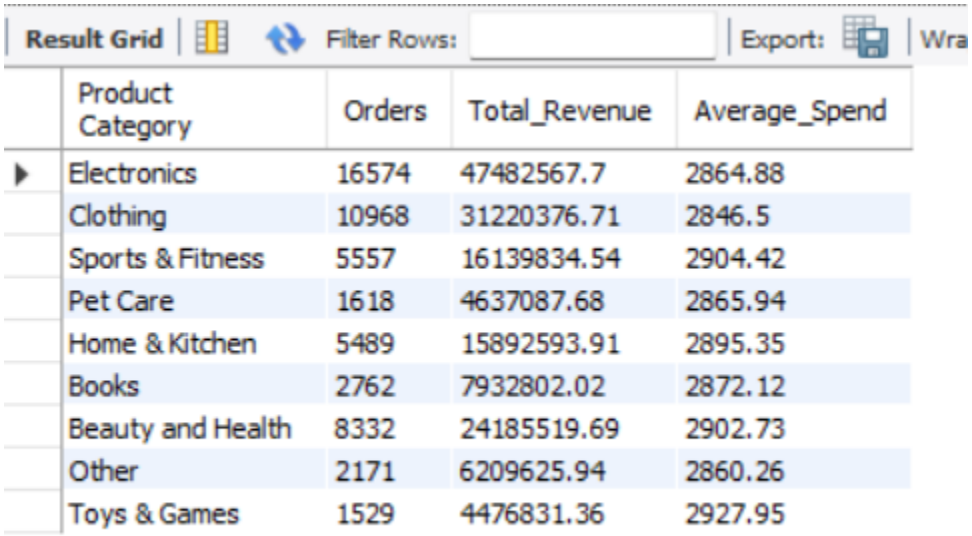
Gender	Purchase Method	Net Amount
Male	Credit Card	8361.2256
Male	Credit Card	8238.5352
Male	Credit Card	8146.068
Male	Credit Card	8133.7704
Male	Credit Card	8041.7064
Male	Credit Card	7954.8
Male	Credit Card	7917.9004
Male	Credit Card	7877.9952
Male	Credit Card	7839.0944
Male	Credit Card	7834.8235
Male	Credit Card	7806.8256
Male	Credit Card	7789.0672
Male	Credit Card	7700.8142
Male	Credit Card	7616.8176
Male	Credit Card	7595.7112
Male	Credit Card	7554.3622
Male	Credit Card	7516.184
Male	Credit Card	7511.2263
Male	Credit Card	7510.8264
Male	Credit Card	7507.5427

Query 4: GROUP BY + Aggregates (SUM, AVG)

Total and average Net Amount by each Product Category

```sql
SELECT `Product Category`,
       COUNT(*) AS Orders,
       ROUND(SUM(`Net Amount`),2) AS Total_Revenue,
       ROUND(AVG(`Net Amount`),2) AS Average_Spend
FROM ecommerce1
GROUP BY `Product Category`;
```

Output:



Result Grid | Filter Rows: | Export: | Wra

Product Category	Orders	Total_Revenue	Average_Spend
Electronics	16574	47482567.7	2864.88
Clothing	10968	31220376.71	2846.5
Sports & Fitness	5557	16139834.54	2904.42
Pet Care	1618	4637087.68	2865.94
Home & Kitchen	5489	15892593.91	2895.35
Books	2762	7932802.02	2872.12
Beauty and Health	8332	24185519.69	2902.73
Other	2171	6209625.94	2860.26
Toys & Games	1529	4476831.36	2927.95

Query 5: Subquery

Customers with Discount Above Average

```sql
SELECT ï»¿CID, Gender,
       `Product Category`,
       `Discount Name`,
       `Discount Amount (INR)`
FROM ecommerce1
WHERE `Discount Amount (INR)` >
      (
      SELECT AVG(`Discount Amount (INR)`)
      FROM ecommerce1
      );
```

Output:

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

ï»¿CID	Gender	Product Category	Discount Name	Discount Amount (INR)
180079	Male	Electronics	SEASONALOFFER21	175.19
337580	Other	Clothing	SEASONALOFFER21	211.54
447553	Male	Sports & Fitness	WELCOME5	439.92
889269	Other	Clothing	SAVE10	437.5
570860	Male	Electronics	FESTIVE50	269.87
367541	Other	Home & Kitchen	NEWYEARS	268.7
454101	Male	Electronics	NEWYEARS	368.53
337178	Other	Home & Kitchen	SEASONALOFFER21	375.51
443120	Female	Sports & Fitness	NEWYEARS	268.54
292237	Other	Beauty and Health	FESTIVE50	353.85
336108	Female	Home & Kitchen	NEWYEARS	450.37
427162	Other	Beauty and Health	SEASONALOFFER21	425.57
572298	Male	Electronics	WELCOME5	144.53
592489	Male	Beauty and Health	WELCOME5	489.29
297594	Female	Sports & Fitness	NEWYEARS	404.32
862400	Other	Electronics	NEWYEARS	347.01
892356	Female	Toys & Games	NEWYEARS	160.18
970294	Male	Sports & Fitness	SAVE10	263.6
770342	Other	Toys & Games	SEASONALOFFER21	172.82
136445	Male	Sports & Fitness	WELCOME5	290.36
983370	Male	Electronics	NEWYEARS	197.31

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Query 6: JOINS

Customers with Email and Product Category

```
SELECT
    e.ï»¿CID,
    c.Customer_Name,
    c.Email,
    e.`Product Category`,
    e.`Net Amount`
FROM ecommerce1 e
INNER JOIN customer_details c
  ON e.ï»¿CID = c.CID
ORDER BY e.`Net Amount` DESC;
```

Output:

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

ï»¿CID	Customer_Name	Email	Product Category	Net Amount
933551	Anjali Mehra	anjali.mehra@example.com	Beauty and Health	5731.8723
668787	Priya Das	priya.das@example.com	Electronics	5593.9356
538174	Aarav Sharma	aarav.sharma@example.com	Sports & Fitness	5025.7116
180079	Rohit Kumar	rohit.kumar@example.com	Electronics	4463.801875
414167	Rohit Kumar	rohit.kumar@example.com	Pet Care	3961.671
110195	Maya Nair	maya.nair@example.com	Electronics	3893.439525
933551	Anjali Mehra	anjali.mehra@example.com	Clothing	3373.0264
414167	Rohit Kumar	rohit.kumar@example.com	Clothing	3126.1802
668787	Priya Das	priya.das@example.com	Clothing	3050.0756
933551	Anjali Mehra	anjali.mehra@example.com	Home & Kitchen	2677.586625
447553	Imran Sheikh	imran.sheikh@example.com	Electronics	2551.6946
414167	Rohit Kumar	rohit.kumar@example.com	Home & Kitchen	2433.535
110195	Maya Nair	maya.nair@example.com	Clothing	2203.214
787512	Imran Sheikh	imran.sheikh@example.com	Books	1952.4153
933551	Anjali Mehra	anjali.mehra@example.com	Electronics	1901.7964
447553	Imran Sheikh	imran.sheikh@example.com	Sports & Fitness	1852.7315
337580	Maya Nair	maya.nair@example.com	Clothing	1774.832575
110195	Maya Nair	maya.nair@example.com	Home & Kitchen	1768.5864
933551	Anjali Mehra	anjali.mehra@example.com	Electronics	1557.883

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Query 7: Top 3 Locations by Gross Revenue

```
SELECT Location,
       SUM(`Gross Amount`) AS Total_Gross
FROM ecommerce1
GROUP BY Location
ORDER BY Total_Gross DESC
LIMIT 3;
```

Output:

	Location	Total_Gross
▶	Mumbai	33636840.02757497
	Delhi	32551443.42224999
	Bangalore	24754136.794174973

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