

TASK_3_SQL_OUTPUTS

1. Import data:

The screenshot shows the SQLiteonline.com interface. On the left, there's a sidebar with options like 'Add DataBase', 'SQLite', 'MariaDB', 'PostgreSQL', and 'MS SQL'. The main area is titled 'customer_transaction.csv' and shows a modal for importing a CSV file. The modal includes fields for 'File' (with an 'Open' button), 'Type' (set to 'CSV'), 'Table name' (set to 'customer_transaction'), 'Delimiter' (set to ','), 'Escape' (set to '\'), 'Column name' (set to 'First line'), and 'Command' (set to 'Run'). Below these fields, a preview of the CSV data is shown:

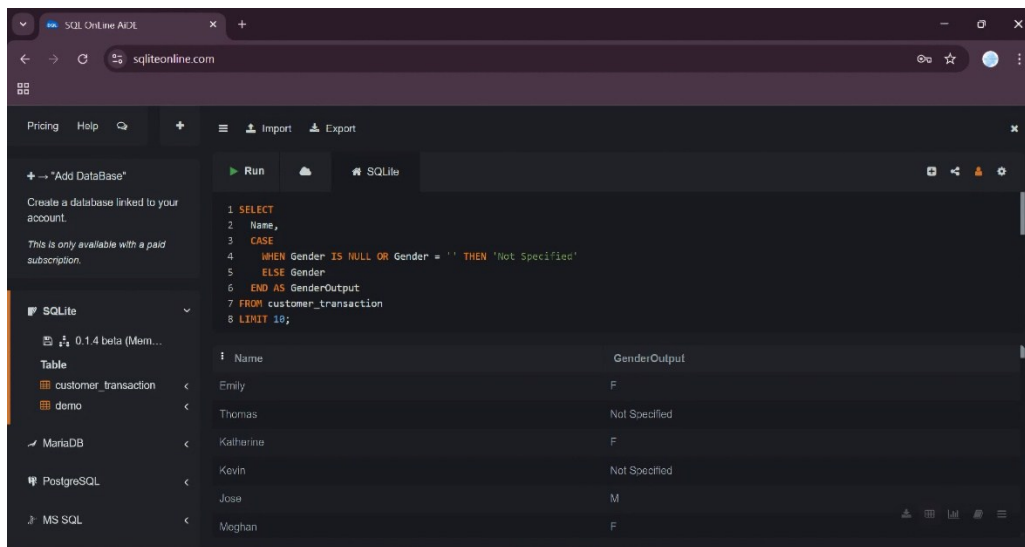
Customer ID	Name	Surname	Gender	Birthdate	Transaction Amount
752858	Sean	Rodriguez	F	2002-10-20	35.47
26381	Michelle	Phelps		1985-10-24	2552.72
305449	Jacob	Williams	M	1981-10-25	115.97

The screenshot shows the SQLiteonline.com interface with the 'Run' button highlighted. The 'SQLite' tab is selected in the top right corner. The sidebar on the left shows the 'customer_transaction' table selected under the 'SQLite' database.

The screenshot shows the SQLiteonline.com interface with the SQL query 'SELECT * FROM customer_transaction LIMIT 10;' entered in the main area. The results are displayed in a table with 10 rows:

Customer ID	Name	Surname	Gender	Birthdate	Transaction Amount	Date	Merchant Name	Category
752858	Sean	Rodriguez	F	2002-10-20	35.47	2023-04-03	Smith-Russell	Cosmetic
26381	Michelle	Phelps		1985-10-24	2552.72	2023-07-17	Peck, Spencer	Travel
305449	Jacob	Williams	M	1981-10-25	115.97	2023-09-20	Steele Inc	Clothing
988259	Nathan	Snyder	M	1977-10-26	11.31	2023-01-11	Wilson, Wilso...	Cosmetic
764762	Crystal	Knapp	F	1951-11-02	62.21	2023-08-13	Palmer-Hinton	Electronics
576539	Monica	Bartlett	F	2001-10-20	99.14	2023-08-24	Tran, Torres ...	Cosmetic
124681	Thomas	Shaw		1976-10-28	145.94	2023-08-30	Evans, Griffin ...	Cosmetic
521897	Kelsey	Pena	F	1968-10-28	161.39	2023-02-08	Miller PLC	Cosmetic

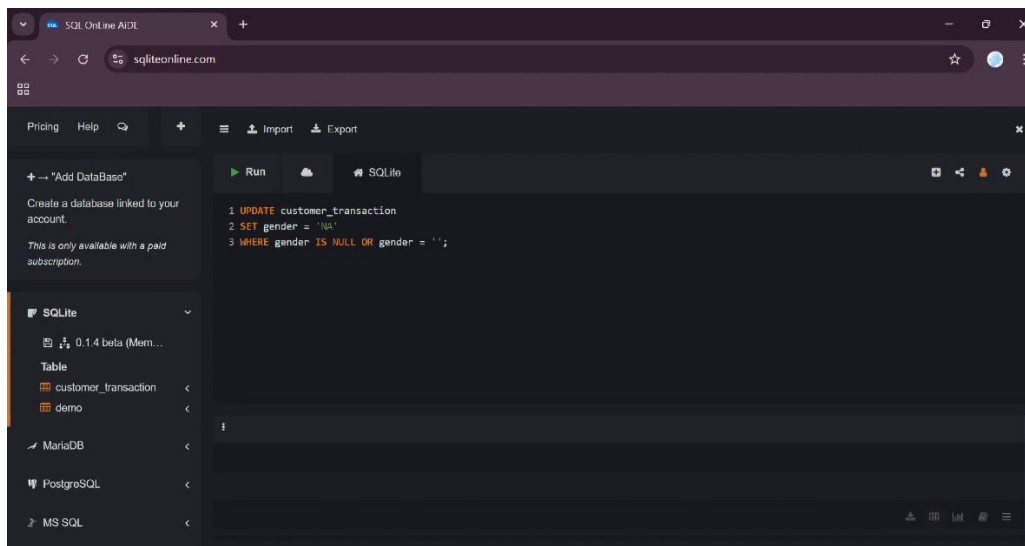
2. Check and Update gender:



The screenshot shows the SQL Online AIDL interface. The left sidebar contains a list of databases: SQLite (0.1.4 beta), MariaDB, PostgreSQL, and MS SQL. The main area displays a SQL query and its results.

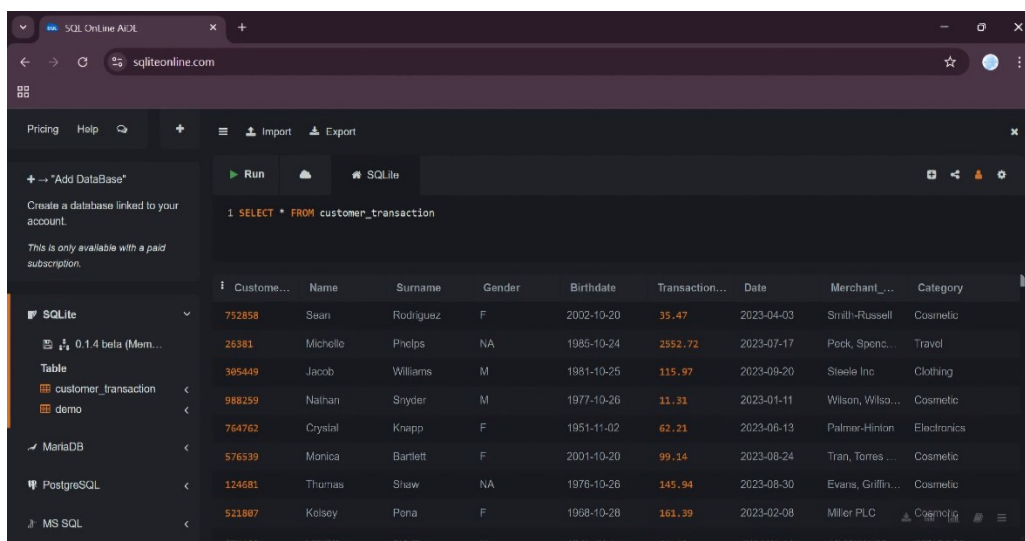
```
1 SELECT
2   Name,
3   CASE
4     WHEN Gender IS NULL OR Gender = '' THEN 'Not Specified'
5     ELSE Gender
6   END AS GenderOutput
7 FROM customer_transaction
8 LIMIT 10;
```

Name	GenderOutput
Emily	F
Thomas	Not Specified
Katherine	F
Kevin	Not Specified
Jose	M
Meghan	F



The screenshot shows the SQL Online AIDL interface with an UPDATE query entered in the main area.

```
1 UPDATE customer_transaction
2 SET gender = 'NA'
3 WHERE gender IS NULL OR gender = '';
```



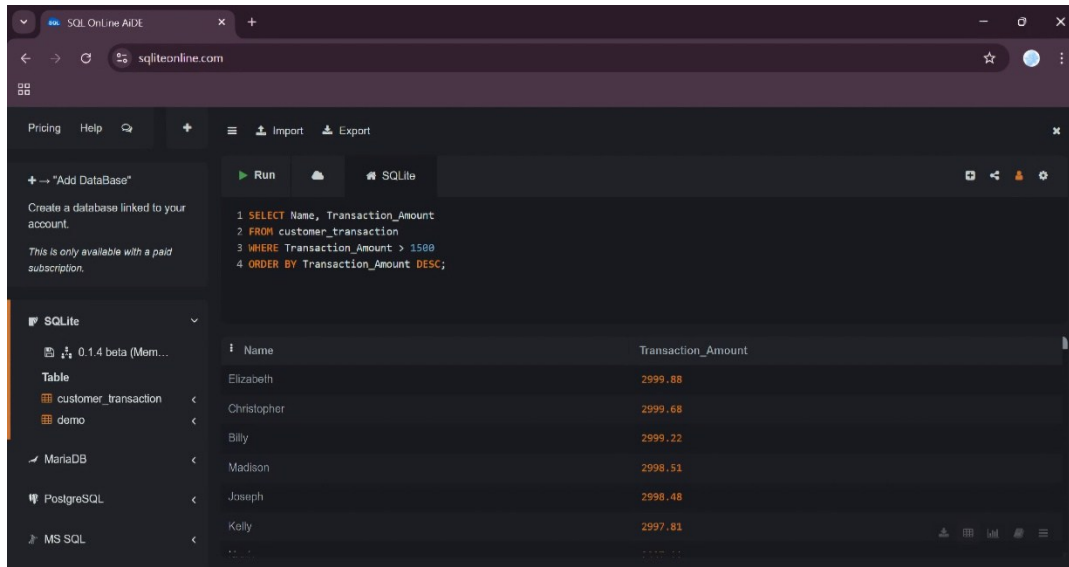
The screenshot shows the SQL Online AIDL interface with a SELECT query and its results.

```
1 SELECT * FROM customer_transaction
```

Customer...	Name	Surname	Gender	Birthdate	Transaction...	Date	Merchant_...	Category
752858	Sean	Rodriguez	F	2002-10-20	35.47	2023-04-03	Smith-Russell	Cosmetic
26381	Michelle	Phelps	NA	1985-10-24	2552.72	2023-07-17	Pock, Spon...	Travel
395449	Jacob	Williams	M	1981-10-25	115.97	2023-09-20	Steele Inc	Clothing
988259	Nathan	Snyder	M	1977-10-26	11.31	2023-01-11	Wilson, Wils...	Cosmetic
764762	Crystal	Knapp	F	1951-11-02	62.21	2023-06-13	Palmer-Hinton	Electronics
576539	Monica	Bartlett	F	2001-10-20	99.14	2023-08-24	Tran, Torres ...	Cosmetic
124681	Thomas	Shaw	NA	1976-10-26	145.94	2023-08-30	Evans, Griffin...	Cosmetic
521807	Kelsey	Pona	F	1988-10-28	161.39	2023-02-08	Miller PLC	Cosmetic

3. Basic Queries:

- a. List all the customers names who made transactions above 1500, sorted by amount (highest first):



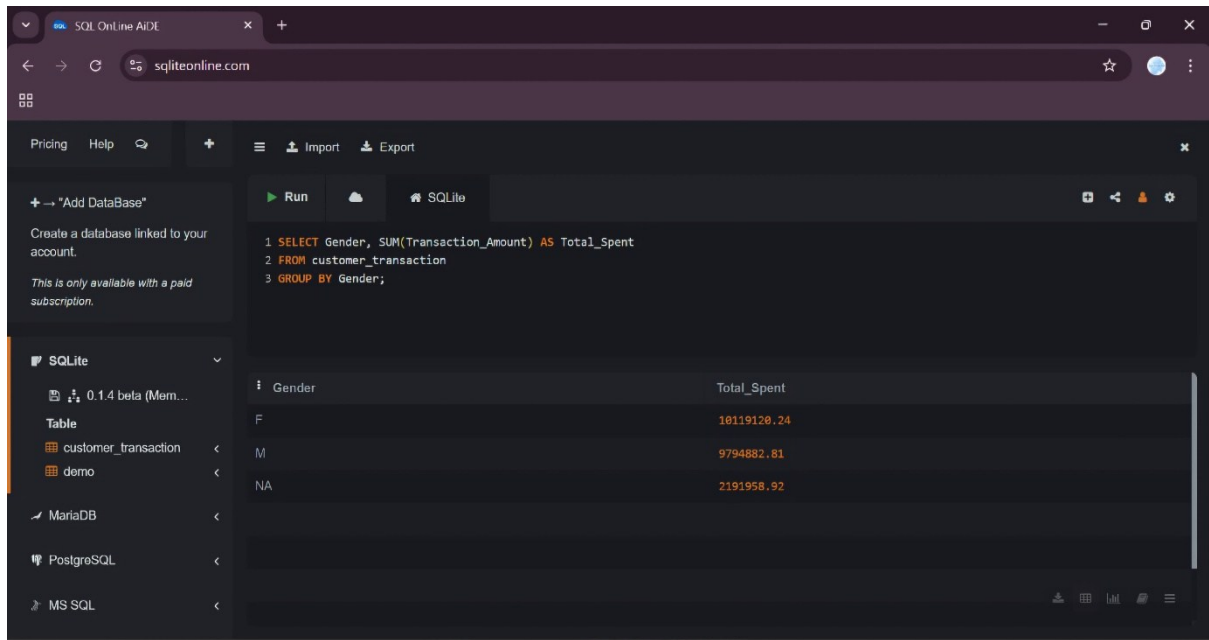
The screenshot shows the SQL Online AIDE interface. The query entered is:

```
1 SELECT Name, Transaction_Amount
2 FROM customer_transaction
3 WHERE Transaction_Amount > 1500
4 ORDER BY Transaction_Amount DESC;
```

The results table displays the following data:

Name	Transaction_Amount
Elizabeth	2999.88
Christopher	2999.68
Billy	2999.22
Madison	2998.51
Joseph	2998.48
Kelly	2997.81

- b. Show total transaction amount done by each gender:



The screenshot shows the SQL Online AIDE interface. The query entered is:

```
1 SELECT Gender, SUM(Transaction_Amount) AS Total_Spent
2 FROM customer_transaction
3 GROUP BY Gender;
```

The results table displays the following data:

Gender	Total_Spent
F	10119128.24
M	9794882.81
NA	2191958.92

4. Subqueries:

- a. Find the customers who spent more than the average transaction amount:

The screenshot shows the SQL Online AIDE web application. The left sidebar contains a list of databases: SQLite (selected), MariaDB, PostgreSQL, and MS SQL. The main area displays a SQL query and its results. The query is a subquery that filters customers based on their transaction amount relative to the average transaction amount.

```
1 SELECT Name, Transaction_Amount
2 FROM customer_transaction
3 WHERE Transaction_Amount > (
4     SELECT AVG(Transaction_Amount) FROM customer_transaction
5 );
```

Name	Transaction_Amount
Michelle	2552.72
Kimberly	928.68
Chad	475.82
Steven	1468.14
Kimberly	924.23
Brian	781.85
William	1479.49
Anna	7071.40

5. Aggregate Functions:

- a. Show Average, Sum, Minimum, Maximum transaction amount:

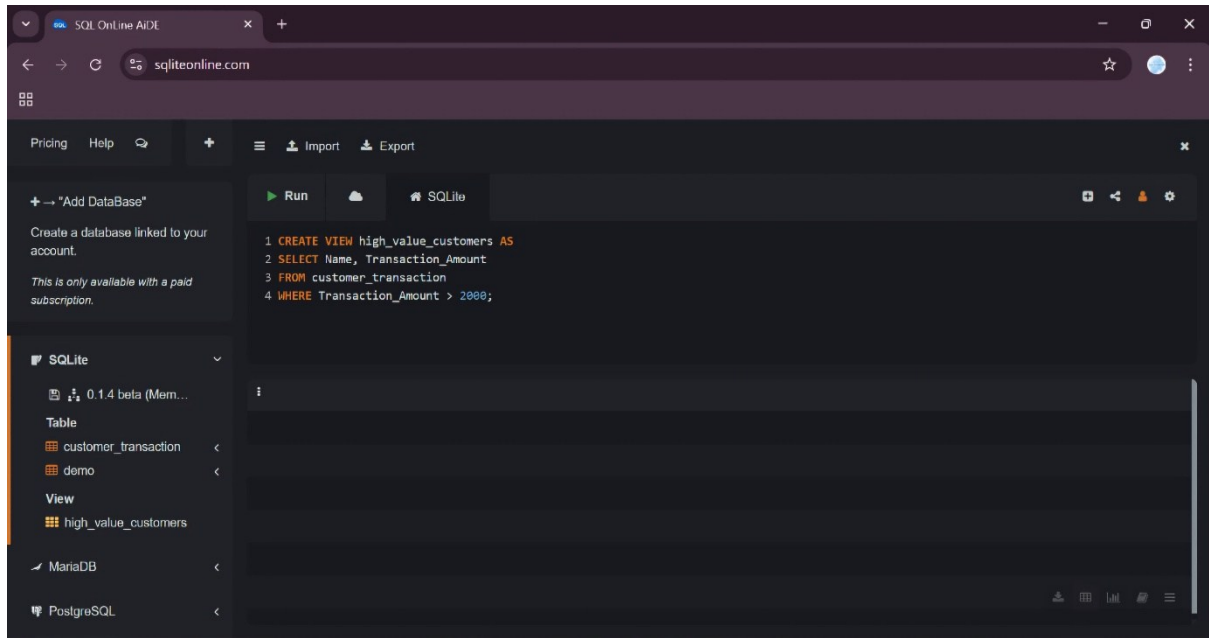
The screenshot shows the SQL Online AIDE web application. The left sidebar contains a list of databases: SQLite (selected), MariaDB, PostgreSQL, and MS SQL. The main area displays a SQL query and its results. The query uses aggregate functions to calculate the average, maximum, and minimum transaction amounts.

```
1 SELECT
2     AVG(Transaction_Amount) AS Avg_Amount,
3     MAX(Transaction_Amount) AS Max_Amount,
4     MIN(Transaction_Amount) AS Min_Amount
5 FROM customer_transaction;
```

Avg_Amount	Max_Amount	Min_Amount
442.11923939999997	2999.88	5.01

6. Create Views:

- a. Create a view of customers whose transactions are greater than 2000:

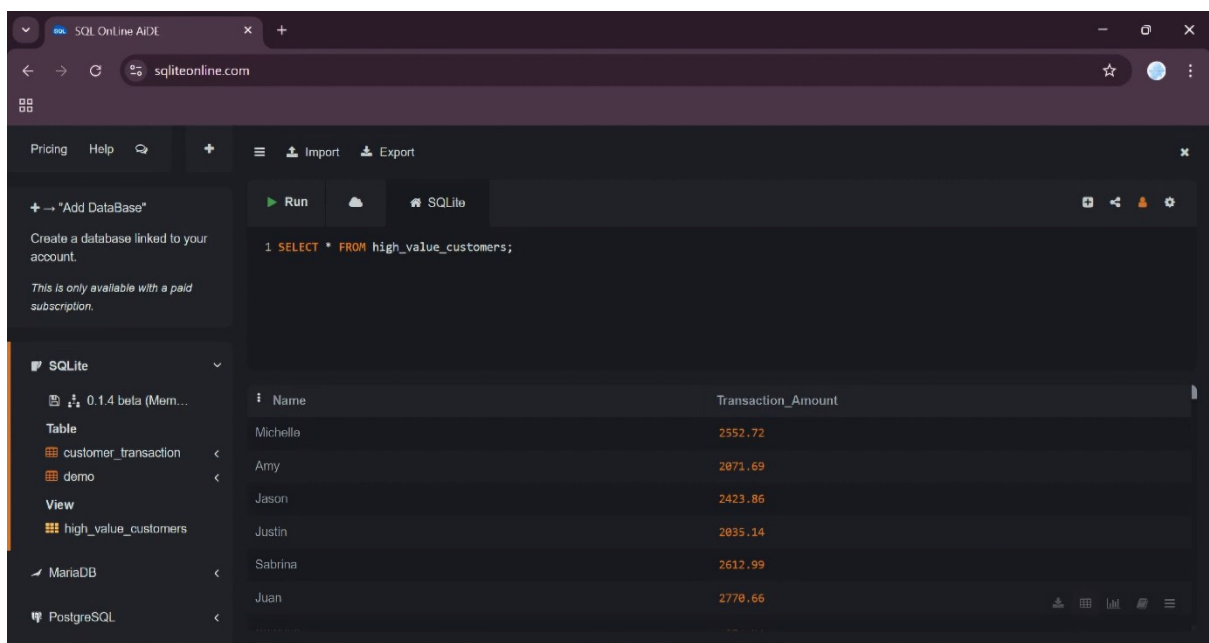


The screenshot shows the SQL Online AIDE web application. The browser address bar displays 'sqliteonline.com'. The interface includes a sidebar on the left with a tree view of the database structure. Under the 'SQLite' section, the 'View' folder contains a view named 'high_value_customers'. The main editor area contains the following SQL code:

```
1 CREATE VIEW high_value_customers AS
2 SELECT Name, Transaction_Amount
3 FROM customer_transaction
4 WHERE Transaction_Amount > 2000;
```

The 'Run' button is visible above the editor. The bottom right corner of the editor shows icons for download, table view, and other utilities.

- b. Now, select from that view:



The screenshot shows the same SQL Online AIDE interface. The SQL editor now contains the query:

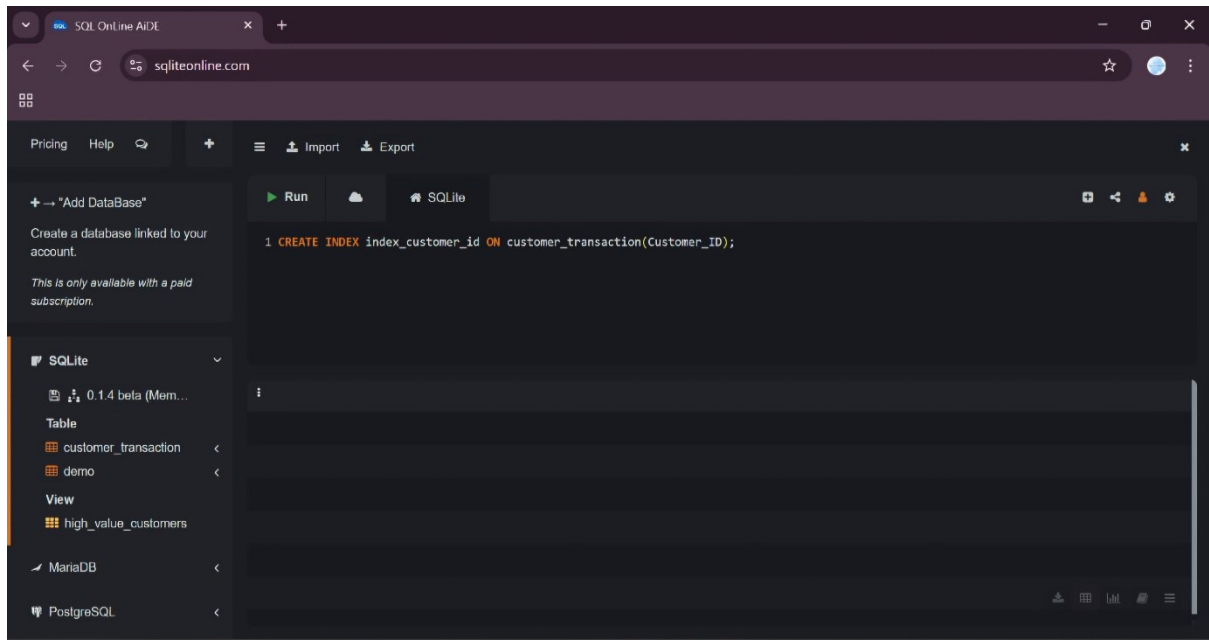
```
1 SELECT * FROM high_value_customers;
```

The 'Run' button is visible. Below the editor, the results of the query are displayed in a table with two columns: 'Name' and 'Transaction_Amount'.

Name	Transaction_Amount
Michelle	2552.72
Amy	2071.69
Jason	2423.86
Justin	2035.14
Sabrina	2612.99
Juan	2770.66

7. Indexing (for optimization):

a. Create an index on Customer_ID to speed up lookups and joins:



b. Create an index on Gender for filtering:

