

SQL Task 3 - Data Analysis Report

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Course: Data Analytics / SQL Essentials

Institution: _____

Submitted as part of Task 3 - SQL for Data Analysis

SQL Queries Used

1. Create Database

```
CREATE DATABASE IF NOT EXISTS ECCOMERCE;  
USE ECCOMERCE;
```

2. Enable CSV Import

```
SET GLOBAL local_infile = 1;
```

3. Create Table

```
CREATE TABLE IF NOT EXISTS ecommerce (...);
```

4. Load Data

```
LOAD DATA LOCAL INFILE 'D:/desktop/ELEVATE LABS/Task 3/ecommerce.csv' ...;
```

5. Verify Data

```
SELECT COUNT(*) AS total_rows FROM ecommerce;  
SELECT * FROM ecommerce LIMIT 10;
```

6. Analysis Queries

- Total Revenue Query
- Monthly Revenue Query
- Top Countries Query

7. Indexes for Optimization

```
CREATE INDEX idx_date ON ecommerce(InvoiceDate);  
CREATE INDEX idx_country ON ecommerce(Country);
```

Result Screenshots

Screenshot 1: Database Creation, Data Load, and Row Count Output

The screenshot shows the MySQL Workbench interface. The top navigation bar includes tabs for Local instance MySQL80 (ecommerce), MySQL Model, and Local instance MySQL80 (ecommerce). The main area displays a query editor titled "ecommerce query" containing the following SQL code:

```
25  OPTIONALY ENCLOSED BY ''
26  LINES TERMINATED BY '\r\n'          -- Windows line endings
27  IGNORE 1 ROWS
28  (InvoiceNo, StockCode, Description, Quantity, @InvoiceDate, UnitPrice, CustomerID, Count)
29  SET InvoiceDate = STR_TO_DATE(@InvoiceDate, '%m/%d/%Y %H:%i'); -- convert date
30
31  -- 4. Verify data load
32 • SELECT COUNT(*) AS total_rows FROM ecommerce;
```

Below the query editor is a "Result Grid" pane showing a single row of data:

total_rows
541909

At the bottom of the interface, the "Output" pane shows the execution history:

#	Time	Action	Message
1	22:12:36	CREATE DATABASE IF NOT EXISTS ECOMMERCE	1 row(s) affected
2	22:12:36	USE ECOMMERCE	0 row(s) affected
3	22:20:24	CREATE DATABASE IF NOT EXISTS ECOMMERCE	1 row(s) affected, 1 warning(s): 1007 Can't create database 'ecommerce'; database exists
4	22:20:24	USE ECOMMERCE	0 row(s) affected
5	22:20:34	CREATE DATABASE IF NOT EXISTS ECOMMERCE	1 row(s) affected, 1 warning(s): 1007 Can't create database 'ecommerce'; database exists

Screenshot 1: Database Creation, Data Load, and Row Count Output

Screenshot 2: Sample Data (SELECT * LIMIT 10)

31 -- 4. Verify data load

A screenshot of a database query results window. The title bar says "31 -- 4. Verify data load". The toolbar includes "Result Grid", "Filter Rows:", "Export", "Wrap Cell Content", and "Fetch rows". The main area shows a table with 10 rows of data:

	InvoiceNo	StockCode	Description	Quantity	InvoiceDate	UnitPrice	CustomerID	Country
▶	536365	85123A	WHITE HANGING HEART T-LIGHT HOLDER	6	NULL	2.55	17850	United Kingdom
	536365	71053	WHITE METAL LANTERN	6	NULL	3.39	17850	United Kingdom
	536365	84406B	CREAM CUPID HEARTS COAT HANGER	8	NULL	2.75	17850	United Kingdom
	536365	84029G	KNITTED UNION FLAG HOT WATER BOTTLE	6	NULL	3.39	17850	United Kingdom
	536365	84029E	RED WOOLLY HOTTIE WHITE HEART.	6	NULL	3.39	17850	United Kingdom
	536365	22752	SET 7 BABUSHKA NESTING BOXES	2	NULL	7.65	17850	United Kingdom
	536365	21730	GLASS STAR FROSTED T-LIGHT HOLDER	6	NULL	4.25	17850	United Kingdom
	536366	22633	HAND WARMER UNION JACK	6	NULL	1.85	17850	United Kingdom
	536366	22632	HAND WARMER RED POLKA DOT	6	NULL	1.85	17850	United Kingdom
	536367	84879	ASSORTED COLOUR BIRD ORNAMENT	32	NULL	1.69	13047	United Kingdom

Screenshot 2: Sample Data (SELECT * LIMIT 10)

Screenshot 3: Total Revenue Calculation

A screenshot of a database query results window. The title bar says "31 -- 4. Verify data load". The toolbar includes "Result Grid", "Filter Rows:", and a search bar. The main area shows a table with 1 row of data:

	total_revenue
▶	9747747.93

At the bottom, there are tabs labeled "Result 1", "ecommerce 2", "Result 3", and "Result 4".

Screenshot 3: Total Revenue Calculation

Screenshot 4: Monthly Revenue Summary

	month	revenue
▶	NULL	4148278.57
	2010-12	296822.74
	2011-01	350311.78
	2011-02	300023.59
	2011-03	449541.86
	2011-04	293104.46
	2011-05	421237.66
	2011-06	418241.69
	2011-07	439170.41
	2011-08	373237.47
	2011-09	704074.68
	2011-10	644778.01
	2011-11	908925.01

Result 1 ecommerce 2 Result 3 Result 4 × Result 5

Screenshot 4: Monthly Revenue Summary

Screenshot 5: Top Countries by Revenue

	Country	revenue
▶	United Kingdom	8187806.36
	Netherlands	284661.54
	EIRE	263276.82
	Germany	221698.21
	France	197403.90
	Australia	137077.27
	Switzerland	56385.35
	Spain	54774.58
	Belgium	40910.96
	Sweden	36595.91

Result 1 ecommerce 2 Result 3 Result 4 Result 5 ×

Screenshot 5: Top Countries by Revenue

