

GTA: SQL Bay City Hustle



Welcome to Bay City SQL Bootcamp

Welcome, agent. Before you hit the streets and run SQL ops for real, you need to master the tools of your trade. This section introduces you to the basic SQL syntax you'll use to survive, thrive, and dominate in Bay City. Each concept comes with a quick mission to reinforce your training.

SELECT & FROM – Scanning the Grid

In Bay City, intelligence is power. To retrieve information, you'll use the SELECT statement, and FROM tells the system where to look.

Syntax:

```
SELECT column1, column2 FROM TableName;
```

Example:

```
SELECT Name, WantedLevel FROM GTA.Citizens;
```

Quick Mission:

List all citizen names and their professions from the GTA.Citizens table.

WHERE – Filtering Suspects

You don't need the entire city report — just the troublemakers. The WHERE clause lets you filter results based on a condition.

Syntax:

```
SELECT * FROM TableName WHERE condition;
```

Example:

```
SELECT * FROM GTA.Citizens WHERE WantedLevel > 1;
```

Quick Mission:

Retrieve all citizens who are under 25 years old.

ORDER BY – Ranking the Danger

Sometimes you need your results sorted — fastest to slowest, richest to poorest, or highest risk to lowest. Use ORDER BY to make sense of chaos.

Syntax:

```
SELECT * FROM TableName ORDER BY column ASC|DESC;
```

Example:

```
SELECT Name, Speed FROM GTA.Vehicles ORDER BY Speed DESC;
```

Quick Mission:

List all vehicle types sorted from slowest to fastest.

GROUP BY – Squad-Level Insights

Want to know how many missions each suspect completed? Or the average reward per mission? GROUP BY turns messy data into smart summaries.

Syntax:

```
SELECT column, AGG(column2) FROM Table GROUP BY column;
```

Example:

```
SELECT CitizenID, COUNT(*) FROM GTA.Assignments GROUP BY CitizenID;
```

Quick Mission:

How many vehicles does each citizen own?

BONUS: Aggregates – The City at a Glance

SQL lets you calculate totals, averages, and more using aggregate functions:

- COUNT()
- SUM()
- AVG()
- MIN()
- MAX()

Example:

```
SELECT AVG(Speed) FROM GTA.Vehicles;
```

Quick Mission:

What is the highest wanted level in the city?

SQL Operations: Full Training Missions

Now that you've completed bootcamp, it's time to dive into real missions. These 10 scenarios take place in the gritty streets of Bay City. Each one pushes your skills further.

MISSION 1: Suspect Scanner

Objective: Practice using WHERE to filter data

Story:

Claudia "Codewitch" Trejo has tapped into the Bay City suspect registry. She's looking for known troublemakers with a Wanted Level of 2 or higher to flag for further investigation.

Assignment:

Write a SQL query to return all suspects with a WantedLevel of 2 or more. Include the suspect's name, alias, and wanted level.

MISSION 2: Vehicle Watchlist

Objective: Use JOIN and WHERE to combine tables and filter stolen data

Story:

Jakeyl "Beardstorm" Millan is tasked with locating all stolen vehicles. He needs a list that matches each stolen vehicle to its owner.

Assignment:

Write a query that returns the name of the suspect, the vehicle type, and the brand of all stolen vehicles (where IsStolen = 1).

MISSION 3: Reward Tracker

Objective: Use GROUP BY, SUM, and ORDER BY to calculate totals

Story:

Frederick “Freddie Finesse” is reviewing his crew’s earnings. He wants to know who completed the most valuable missions so he can pay out bonuses.

Assignment:

Write a SQL query that shows:

- The name of each suspect
- The total money earned from completed missions

Group by name and order by earnings from highest to lowest.

MISSION 4: Mission Speed Metrics

Objective: Use GROUP BY with MIN, MAX, and aggregate logic

Story:

Kevin “Sunset Sniper” Gagante wants a speed report. Some agents move like lightning, others crawl. He wants to know who’s fastest, who’s slowest, and how many missions each agent has completed.

Assignment:

For each suspect who completed missions, return:

- Their name
- The number of missions completed
- Their fastest time
- Their slowest time

MISSION 5: Elite Agent Filter

Objective: Combine aggregates and use HAVING

Story:

Emilya “E-Mage” Illeeva is assembling a secret elite unit. She needs agents who completed at least 2 missions and earned \$4000 or more in total rewards.

Assignment:

Write a query that returns the names of suspects who:

- Completed at least 2 missions
- Earned \$4000 or more total

Only show those who meet both conditions.

Solutions

MISSION 1: Suspect Scanner

Expected Result:

A list of suspects who have a WantedLevel of 2 or higher. Example values:

- Chi-neme-rem Agana (Ghostface) – 2
- Marq Alejandro (Firewall) – 2
- Frederick Canning (Freddie Finesse) – 3
- Jakeyl Millan (Beardstorm) – 2
- J Torres (Midnight Mapper) – 2

Total rows expected: 5

MISSION 2: Vehicle Watchlist

Expected Result:

A list showing which suspects have a stolen vehicle, including:

- Ramsey Mailjard – Motorcycle, ShadowRider
- Jakeyl Millan – Scooter, Zoomie
- J Torres – Van, StealthWagon

Total rows expected: 3

MISSION 3: Reward Tracker

Expected Result:

Names and total earnings of suspects who completed at least one mission, ordered from highest to lowest earnings. Top examples:

- Marq Alejandro – \$5000
- Claudia Trejo – \$6000
- Ramsey Mailjard – \$3000
- Cricelia Prado – \$1500
- Chi-neme-rem Agana – \$1500

Total rows expected: 5

MISSION 4: Mission Speed Metrics

Expected Result:

Each agent's name, how many missions they completed, and the fastest and slowest time. Example rows:

- **Remsey Mailjard - 1 mission - Fastest: 40 min - Slowest: 40 min**
- **Marq Alejandro - 1 mission - Fastest/Slowest: 60 min**
- **Cricelia Prado - 1 mission - Fastest/Slowest: 25 min**
- **Chi-neme-rem Agana - 1 mission - Fastest/Slowest: 20 min**
- **Claudia Trejo - 1 mission - Fastest/Slowest: 55 min**

Total rows expected: 5

MISSION 5: Elite Agent Filter

Expected Result:

Only the suspects who completed at least 2 missions and earned \$4000 or more total.

Expected output:

- **Claudia Trejo**

Total rows expected: 1