



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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Experiment 2

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Subject Name: Technical Training

Subject Code: 25CAP-652

1. Aim:

To analyze student performance using SQL by identifying high-performing students (percentage > 95) and evaluating their distribution across different cities using CASE statements and aggregate functions.

2. Objective:

1. To create and analyze a Students database table containing student ID, name, city, and percentage.
2. To determine the count of students whose percentage is greater than 95:
 - a. Using a CASE statement
 - b. Without using a CASE statement
3. To calculate the average percentage of students (percentage > 95) in each city:
 - a. Using a CASE statement
 - b. Without using a CASE statement
4. To sort the cities in descending order of average percentage to identify cities with the highest-performing students.
5. To understand the use of CASE statements, aggregate functions (COUNT, AVG), GROUP BY, and ORDER BY clauses in SQL for data analysis.

3. Implementation/Code:

```
CREATE TABLE Students (student_id INT, name VARCHAR(50), city
```

```
VARCHAR(50), percentage DECIMAL(5,2));
```

```
INSERT INTO Students VALUES(1, 'Amit', 'Delhi', 96.5);
```

```
INSERT INTO Students VALUES(2, 'Riya', 'Mumbai', 94.2);
```

```
INSERT INTO Students VALUES(3, 'Rahul', 'Delhi', 97.8);
```

```
INSERT INTO Students VALUES(4, 'Sneha', 'Mumbai', 98.1);
```



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```
INSERT INTO Students VALUES(5, 'Ankit', 'Chandigarh', 95.6);
INSERT INTO Students VALUES(6, 'Pooja', 'Delhi', 93.4);
INSERT INTO Students VALUES(7, 'Karan', 'Chandigarh', 96.2);
```

--count

--without case statement

```
SELECT city, COUNT(*) AS students_count FROM Students WHERE
percentage>95 GROUP BY city;
```

--with case statement

```
SELECT city, SUM(CASE WHEN percentage>95 THEN 1 ELSE 0 END) AS
students_count FROM Students GROUP BY city;
```

--average

--without case statement

```
SELECT city, AVG(percentage) AS students_avg FROM Students WHERE
percentage>95 GROUP BY city ORDER BY students_avg DESC;
```

--with case statement

```
SELECT city, AVG(CASE WHEN percentage>95 THEN percentage ELSE
NULL END) AS students_avg FROM Students GROUP BY city ORDER BY
students_avg DESC;
```

4. Output:

The screenshot shows the Oracle Live SQL interface. The URL in the address bar is livesql.oracle.com/ords/f. The title bar says "Live SQL". The main area is titled "SQL Worksheet". A table named "STUDENTS_AVG" is displayed with the following data:

CITY	STUDENTS_AVG
Mumbai	98.1
Delhi	97.15
Chandigarh	99.9

Below the table, there is a "Download CSV" button and a message "3 rows selected.". At the bottom of the interface, there is a footer with the text "2026 Oracle - Live SQL 25.1.1, running Oracle Database 19c CC Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym" and "Built with ❤️ using Oracle APEX - Privacy - Terms of Use". The status bar at the bottom right shows "7:39 PM" and "1/19/2026".



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5. Learning Outcomes:

1. Learn how to use the CASE statement in SQL to count students based on specific conditions.
2. Understand how to calculate the average percentage for selected students using SQL.
3. Know how to group data by city and filter results to focus on high-performing students.
4. Be able to sort results to easily identify which cities have the best-performing students.