

# SQL Query Examples

*CampusCloud project*

*Kwantlen Polytechnic University*

## Query 1

```
-- Top five students in class 401

SELECT
    s.studentID AS `SID`,
    s.fName AS `First Name`,
    s.lName AS `Last Name`,
    ce.grade AS `Grade`
FROM ClassEvaluation ce
JOIN Student s
    ON ce.studentID = s.studentID
WHERE ce.classID = 401
ORDER BY
    CASE ce.grade
        WHEN 'A+' THEN 12
        WHEN 'A' THEN 11
        WHEN 'A-' THEN 10
        WHEN 'B+' THEN 9
        WHEN 'B' THEN 8
        WHEN 'B-' THEN 7
        WHEN 'C+' THEN 6
        WHEN 'C' THEN 5
        WHEN 'C-' THEN 4
        WHEN 'D+' THEN 3
        WHEN 'D' THEN 2
        WHEN 'D-' THEN 1
        WHEN 'F' THEN 0
```

```
ELSE -1  
END DESC  
LIMIT 5;
```

This query selects the top five students from Class 401 by joining ClassEvaluation with the Student table to retrieve each student's first name, last name, and grade. It converts letter grades into numeric values using a CASE expression to ensure correct descending grade ordering. Finally, it returns only the five highest-ranked students based on that ordering.

The screenshot shows a database query results grid. The grid has columns labeled SID, First Name, Last Name, and Grade. The data is as follows:

SID	First Name	Last Name	Grade
207	Mia	White	A+
101	Alice	Brown	A
201	Ella	Wilson	A
202	Liam	Miller	A-
203	Sophia	Taylor	B+

## Query 2

```
-- List faculties with the number of professors in them  
  
SELECT  
    f.facultyName AS 'Faculty Name',  
    COUNT(p.profID) AS 'No. of Professors'  
FROM Professor p  
JOIN Faculty f ON p.facultyID = f.facultyID  
GROUP BY p.facultyID;
```

List faculties with the number of professors in them

The screenshot shows a database result grid with the following data:

Faculty Name	No. of Professo...
Faculty of Science	2
Faculty of Arts	1
Faculty of Technology	2

Result 7 | Read Only

## Query 3

-- Select all classes the student is taking

```
SELECT
    ce.studentID AS 'SID',
    CONCAT(s.fName, " ", s.lName) AS 'Student Full Name',
    c.classID, c.scheduleDay, c.scheduleTime, ce.grade
FROM Class c
JOIN ClassEvaluation ce ON c.classID = ce.classID
JOIN Student s ON ce.studentID = s.studentID
WHERE ce.studentID = 101;
```

Select all classes that student with ID 101 is taking

The screenshot shows a database result grid with the following data:

SID	Student Full Name	classID	scheduleDay	scheduleTime	grade
101	Alice Brown	401	Monday	09:00	A

Result 6 | Read Only

## Query 4

-- GPA Calculator for students

```
SELECT
```

```

s.studentID AS `SID`,
CONCAT(s.fName, " ", s.lName) AS `Student Name`,
AVG(g.gpaValue) AS GPA
FROM (
    SELECT
        studentID,
        CASE grade
            WHEN 'A+' THEN 4.33
            WHEN 'A' THEN 4.00
            WHEN 'A-' THEN 3.67
            WHEN 'B+' THEN 3.33
            WHEN 'B' THEN 3.00
            WHEN 'B-' THEN 2.67
            WHEN 'C+' THEN 2.33
            WHEN 'C' THEN 2.00
            WHEN 'C-' THEN 1.67
            WHEN 'D+' THEN 1.33
            WHEN 'D' THEN 1.00
            WHEN 'D-' THEN 0.67
            WHEN 'F' THEN 0.00
            ELSE NULL
        END AS gpaValue
    FROM ClassEvaluation
) g
JOIN Student s
    ON s.studentID = g.studentID
GROUP BY `SID`;

```

GPA calculator of all students

100% | 1:1 |

Result Grid Filter Rows: Search Export:

The screenshot shows a database result grid with the following data:

SID	Student Name	GPA
101	Alice Brown	4.000000
102	Bob Davis	3.000000
103	Charlie Green	3.330000
104	Dani Lee	2.000000
105	Eva Miller	4.330000
201	Ella Wilson	4.000000
202	Liam Miller	3.670000
203	Sophia Taylor	3.330000
204	Noah Anderson	3.000000
205	Ava Thomas	2.330000
206	Ethan Jackson	2.000000
207	Mia White	4.330000
208	Lucas Harris	1.000000
209	Isabella Martin	0.000000
210	Mason Lee	2.670000

Result 4 | Read Only

A vertical toolbar on the right side of the interface includes icons for Result Grid, Form Editor, Field Types, and Query Stats.

*Written by*

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