



Practical C5 – Row-wise Operations

Objectives of this practical

- What is Row-wise operation (including implication of “+” on attributes and with null value)
- Use of functions: ISNULL, LEN(), SUBSTRING, GETDATE(), LOWER (String), UPPER(String)

Section A: - Performing Calculation on Columns in Select Statement/Null Value Problem

1. Write the SQL statement to list the course code, course name (diploma name), course fee, lab fee, a column to convert any lab fee to zero whenever it is null, and fee per semester (calculated as course fee plus lab fee). Sort the result in ascending order of fee per semester.
2. Write the SQL statement to list the staff name, the salary and bonus of staff that are given pay. Salary is computed as pay plus allowance. Label the calculated salary as salary. Bonus is calculated as 2.25 month of salary. Sort the result by using the formula for bonus.
3. Write the SQL statement to list the department name, maximum staff strength of each department, the number of staff of each department and the number understaffed of each department. The formula for the latter is (max_staff_strength - No_of_staff) which must exceed zero. Re-label it as 'number understaffed'. Sort the result in descending order of 'number understaffed'.

Section B: - String Operator in Column Expression

1. Write the SQL statement to concatenate staff name with department code in parentheses.. Display the result in ascending order. Include only academic staff, that is, staff_no starts with 'S'.
2. Write the SQL statement to display today's date and time.
3. Write the SQL statement to list the staff name and number of years in service. Sort the result in descending order of the number of years in service.
4. Write the SQL statement to list the course code, course name and the number character of the course name of courses with course name exceeding 31 characters. Re-label the last column as 'Length of Diploma Name'. Sort the result in ascending order of Length of Diploma Name.
5. Write the SQL statement to list the course code, and course name in both uppercase and lowercase. Display the results in descending order of course code.

Section C: Optional

1. Write the SQL statement to produce the following result:

Staff_no	Staff_name	Supervisor
T001	Bruce	No Supervisor