CIS 11051 – PRACTICAL FOR DATABASE DESIGN
DEPARTMENT OF ICT
FACULTY OF TECHNOLOGY
SOUTH EASTERN UNIVERSITY OF SRI LANKA

Lab Sheet: 07
Date:

Title: **Logical operators in MySQL.**

Aims: To use appropriate logical operators in MySQL Queries

Task 1:

1. Create a database and insert the following data into the table
   Database Name: CIS11051 & Table Name: Students

ID	*Name*	*Total_Marks*	*GPA*	*Class*	*Gender*
1	John Deo	89	3.8	First	Male
2	Max Ruin	45	2.5	Second lower	Male
3	Arnoid	72	3.3	Second Upper	Female
4	Mary Mike	67	3.4	Second Upper	Female
5	Asruk	52	2.8	Second Lower	Male
6	Tes Qry	90	3.82	First	Female
7	Big John	40	2.0	Pass	Male
8	Alex	78	3.6	Second Upper	Male
9	Alpha	39	2.0	Pass	Female
10	Krish	82	3.71	First	Male

i. Write a query to find students who scored **total marks between 50 and 80**.

ii. Retrieve the list of students whose **GPA is between 3.0 and 3.7**.

iii. Write a query to find students who are **in the 'First' or 'Pass' class**.

iv. Retrieve details of students whose ID is **either 2, 4, or 6**.

v. Find students whose names **start with 'A'**.

vi. Find students whose names **end with 'n'.**

vii. Find students whose names have **'oh' in the middle**.

viii. Retrieve students whose names have **exactly 5 characters**.

ix. Retrieve the Name and Gender of students whose names are **exactly 4 characters long.**

x. Display the ID and Name of students whose **names have 'a' as the second character.**

xi. Retrieve all the students details whose names have at **least 4 characters and end with 'x'.**

xii. Find female students with a GPA **greater than 3.5 and in the 'Second Upper' class**.

xiii. List students who have **more than 60 marks and are in the 'Second Upper' class.**

xiv. Find students who are **male or have a GPA less than 2.5.**

xv. Retrieve students who are in the **'First' class or scored more than 85 marks.**

Task 2: SQL Practice – Logical & Comparison Operators

1. Create a table named employees and insert the following data into the table

EmpID	*FullName*	*Department*	*Salary*	*Age*	*Experience*	*Gender*
101	Alice Green	HR	55000	29	3.5	Female
102	Bob Martin	IT	75000	32	6.0	Male
103	Cathy Woods	Marketing	60000	28	4.2	Female
104	David Lee	IT	72000	35	7.1	Male
105	Eva Stone	Finance	68000	30	5.8	Female
106	Frank Johns	HR	52000	25	2.5	Male
107	Grace Park	Marketing	58000	27	3.8	Female
108	Henry Bolt	IT	80000	40	10.0	Male
109	Isla Ray	Finance	67000	33	6.5	Female
110	Jake Moon	IT	73000	29	4.9	Male

i. Retrieve employees whose salary is between 60000 and 75000.

ii. Display the names of employees who work in either the 'IT' or 'Finance' department.

iii. Find employees whose experience is greater than 5 years and whose salary is less than 75000.

iv. List employees who are female or younger than 28.

v. Retrieve the employee details where the second character of the name is 'a'.

vi. Show employees whose names end with 'n'.

vii. Find employees who are not in the 'Marketing' department.

viii. Retrieve the names and ages of employees whose names have exactly 10 characters.

ix. Get the details of employees who are aged between 30 and 35 and have at least 5 years of experience.

x. Find employees whose salary is more than 70000 or whose experience is less than 4 years.

Discussion

- Can combining multiple comparison and logical operators make a query more powerful or more confusing? Why?