# Lab 3: Introduction to Relational & Logical Operators and intro of IF Conditional statement

## Objectives:

To be familiar with Relational & Logical Operators

To understand the programming knowledge using Decision Statements (if, if-else, if-else ladder, Nested if-else)

## Task Titles:

1. Display the largest among three numbers using if else statement?
2. Check whether a number is even or odd using ternary operator?
3. Check the greater of two numbers using ternary operator?
4. Write a MarksSheet program, input 5 subject marks from user and show data on screen, with percentage, grade and average marks (Assume total marks = 100).
5. Write a C++ program that takes two operands and one operator from the user, the program should implement basic arithmetic operations – sum, average, product, difference, quotient, remainder, and, or and not of given numbers etc.
6. Write a program that asks a number and test the number whether it is multiple of 5 or not, divisible by 7 but not by eleven. (all three conditions should match)
7. Write a C++ program to input angles of a triangle and check whether triangle is valid or not.
8. Check whether the entered character is vowel or consonant?
9. Write a program to produce the output as shown below:

x y expressions results

6 | 3 | x=y+3 | x=6

6 | 3 | x=y-2 | x=1

6 | 3 | x=y\*5 | x=15

6 | 3 | x=x/y | x=2

6 | 3 | x=x%y | x=0

6 | 3 | x=x&y | x=2

6 | 3 | x=x|y | x=7

1. Write a program that takes the week day number as input from user and print the day name of week

E.g., Print Monday if week day number is equal to 1. Similarly, check condition for all 7 days and print the corresponding day name. Print an error message if an invalid number is entered.

1. Write a C++ program to enter month number between (1-12) and print number of days in month.
2. Write a program to calculate and print the Electricity bill of a given customer. The customer id and unit consumed by the user should be taken from the keyboard and display the total amount to pay to the customer. The charges are as follow :

|  |  |
| --- | --- |
| **Unit** | **Charge/unit** |
| upto 199 | @1.20 |
| 200 and above but less than 400 | @1.50 |
| 400 and above but less than 600 | @1.80 |
| 600 and above | @2.00 |

If bill exceeds Rs. 400 then a surcharge of 15% will be charged and the minimum bill should be of Rs. 100/-

**Test Data:**

1001

800

**Expected Output:**

Customer IDNO: 1001

Units Consumed: 800

Amount Charges @Rs. 2.00 per unit: 1600.00

Surchage Amount : 240.00

Net Amount Paid By the Customer : 1840.00