

## Lab 6

### Conditional Statements in C

Marks: 6

**Question 01:**

Get three numbers from user and consider them angles. Find out if those values can form a triangle or not, and if yes, which type of triangle will be formed. (I.e. *Equilateral, Scalene, or Isosceles Triangle*)

**Question 02:**

Take no. of units consumed from user, then calculate his/her Electricity bill based on following information:

No. of Units consumed	Cost per unit
1 - 100	Rs. 05.25
101 - 200	Rs. 07.75
201 - 300	Rs. 08.92
301 - 400	Rs. 11.55
400+	Rs. 12.71

**Question 03:**

Write a program to check whether the year is leap year or not.

**Question 04:**

Write a program for Zodiac, it should take inputs of two integers M and D and prints the Zodiac sign corresponding to month M (1 = January, 12 = December) and day D. Use the following table

SIGN	FROM	TO
Capricorn	December 22	January 19
Aquarius	January 20	February 17
Pisces	February 18	March 19

Aries	March 20	April 19
Taurus	April 20	May 20
Gemini	May 21	June 20
Cancer	June 21	July 22
Leo	July 23	August 22
Virgo	August 23	September 22
Libra	September 23	October 22
Scorpio	October 23	November 21
Sagittarius	November 22	December 21

**Question 05:**

A company is giving an increment to its employees who have served longer than 3 years. Write a program that will require the employee to input year of service and their salary. Your program then has to calculate the increment in salary based on the table below.

Salary	Increment
Salary >= 40000	2%
40000 PKR < Salary >= 20000 PKR	2.5%
20000 PKR < Salary >= 15000 PKR	4.0%
15000 PKR < Salary >= 10000 PKR	7.0%

```
Enter years of service: 4
Enter your salary: 25000
You have an increment of 625 PKR now your salary is 25625
PKR
```

**Question 06:**

Make a scientific calculator using switch case. Your calculator must have the ADDITION, SUBTRACTION, DIVISION, MULTIPLICATION, MODULO, SQUARE, SQUARE ROOT, CUBE ROOT, EXPONENT, LOGARITHM, SINUSOIDAL, CO-SINUSOIDAL, TANGENT and ABSOLUTE value of a number.

```
                                CALCULATOR
1-   addition
2-   subtraction
3-   division
4-   multiplication
5-   modulo
6-   square
7-   square root
8-   cube root
9-   exponent
10-  logarithm
11-  sinusoidal
12-  co-sinusoidal
13-  tangent
14-  absolute
Enter option to perform operation: 8
Enter number to find cube root: 27
Cube root of 27 is: 3
```