

Objectives:

At the end of the class the students should be able to:

- Use if.....else, nested if else in C programs.

Exercise 1

Write a C program to input values for three angles and display whether a triangle can be formed or not using given angle values.

Hint : To form a triangle, the summation of all three angles should be equal to 180.

- Identify the inputs, calculation and output
- Write the C program.
- Set a break point to the statement that reads the first user input.
- Using debugging option, add watches to the declared variables.
- Using next line button, execute remaining statements and check how variable values are changed.
- Observe how the program selects the output statement based on the calculations.

Exercise 2

Write a C program to input the first character of the shape (R – Rectangle, Triangle – T, Circle – C) and calculate the area. The following table shows the inputs and the formula to calculate the area of different shapes.

Shape	Inputs	Area
Rectangle	width, length	width * length
Triangle	base, height	base * height / 2
Circle	radius	π * radius * radius

If user inputs invalid character, display an error message.

Sample output 01

Enter the first character of the shape (R, T, C) : R

Enter width : 5.5

Enter length : 10

Area of the rectangle = 55.00

IT1010 – Introduction to Programming**Semester 1, 2022**Sample output 02

Enter the first character of the shape (R, T, C) : T

Enter base : 4

Enter height : 10

Area of the rectangle = 20.00

- Write a C program.
- Set a break point at the statement that reads the first user input.
- Using debugging option, add watches to the declared variables.
- Using next line button, execute remaining statements and check how variable values are changed with different user input.

Exercise 3

Adventure resort provides following packages.

Package Type	Title	Cost per person
1	Horse ride	2000/=
2	Scuba Diving	5000/=
3	Water Rafting	7000/=

Write a C program to input the package type and number of people from the key board and calculate total cost. T

- Identify the user inputs, calculations and outputs.
- Write a C program using switch selection control structure.
- Set a break point at the statement that reads the first user input.
- Using debugging option, add watches to the declared variables.
- Using next line button, execute remaining statements and check how variable values are changed with different user input.