Assignment

Question 1: -
Define a struct called Book with members for title, author, price, and pages. Write a program to:

- Take input for 3 books.

- Print out the details of the book with the highest price.

Question 2: -

Create a struct called Point with x and y coordinates. Write a function that takes two Point structs as parameters and returns the distance between them as a double. Implement the function and test it with different points.

Question 3: -

Create a struct called Point with x and y coordinates. Write a function that takes two Point structs as parameters and returns the distance between them as a double. Implement the function and test it with different points.

Question 4: -

Define a struct Student with members for name, roll_number, and marks (an array to hold marks for 3 subjects). Write a program to:

- Input data for 5 students.

- Write a function to calculate the average marks of each student and print the name of the student with the highest average marks.

Question 5: -

Define an enum TrafficLight with values RED, YELLOW, and GREEN. Write a program to take user input to select a traffic light color and print the action to be taken (e.g., "Stop" for RED, "Caution" for YELLOW, "Go" for GREEN).

Question 6: -

Write a user-defined function int factorial(int n) that calculates the factorial of a given number n. Write a program that:

- Takes an integer input from the user.

- Calls factorial() and prints the result.

Question 7: -

Write a user-defined function to find the largest number in an array. The function should take an integer array and its size as parameters and return the largest number. Write a program that:

- Takes an array of 10 integers as input.

- Calls the function to find and print the largest number in the array.