Online 1: Conditional Statement (Set 2)

Time: 35 min + Submission: 5 min   Total Mark: 10 + 10 = 20

Problem 1: Check Whether a Point Lies Inside a Circle

Write a C program that checks whether a given 2D point (x, y) lies inside, on, or outside a circle. The program should take the coordinates of the center of the circle, the radius of the circle, and the coordinates of the point as input. [Use float]

Sample Input and Output Pair

Input	Output
Circle center: 0 0 Radius: 5 Point: 3 3	Point is inside the circle
Circle center: 0 0 Radius: 5 Point: 7 5	Point is outside the circle
Circle center: 0 0 Radius: 5 Point: 0 5	Point is on the circle

Problem 2: Electricity Bill Calculation

Write a C program to calculate the electricity bill based on the units consumed:

- Units <= 100: 2 tk per unit
- Units > 100 and <= 300: 2.5 tk per unit
- Units > 300 and <= 500: 5 tk per unit
- Units > 500: 7 tk per unit

The program should ask for the units consumed and calculate the total bill.

Sample Input and Output Pair

Input	Output
Enter consumed unit: 120	Bill: BDT 2900 Tk **Explanation:** 1st 100 => 2 tk = 100 * 2 = 200 Next 20 => 2.5 tk = 20 * 2.5 = 50 Total = 200 + 50 = 250
Enter sales amount: 600	Bill: BDT 2400 Tk

Submission Guideline:

1. Go to a drive except C drive.
2. Create a folder according to your roll number. Ex- 2305xxx
3. Open up the folder and create two files there. Ex- 2305xxx-1.c and 2305xxx-2.c.
4. Place all the code inside the two .c files.
5. Zip the folder and submit it in the moodle.