

C PROGRAMMING

ASSIGNMENT 01

Problem 1: Compute the Perimeter and Area of a Circle

Description:

Write a C program that takes the radius of a circle as input and computes the perimeter and area of the circle. The program should then print both values.

Hint:

Use the following formulas:

- Perimeter (Circumference) = $2 \times \pi \times \text{radius}$
 - Area = $\pi \times \text{radius} \times \text{radius}$
- You can use the value of π as 3.14159.

Problem 2: Calculate Gross Salary of an Employee

Description:

Write a C program that takes Ramesh's basic salary as input and calculates his gross salary. The dearness allowance is 40% of the basic salary, and the house rent allowance is 20% of the basic salary. Gross Salary = Basic Salary + Dearness Allowance + House Rent Allowance.

Hint:

Calculate the dearness allowance as 40% of the basic salary and the house rent allowance as 20% of the basic salary. Then, sum these amounts with the basic salary to get the gross salary.

Problem 3: Convert Distance from Kilometres to Meters, Feet, Inches, and Centimetres

Description:

Write a C program that takes the distance between two cities (in kilometres) as input and converts it into meters, feet, inches, and centimetres.

Hint:

Use the following conversion formulas:

- 1 kilometre = 1000 meters
- 1 meter = 3.28084 feet
- 1 foot = 12 inches
- 1 kilometre = 100000 centimetres

Problem 4: Calculate Aggregate Marks and Percentage

Description:

Write a C program that takes the marks obtained by a student in five different subjects as input. The program should calculate and print the aggregate marks and percentage. Assume that the maximum marks for each subject is 100.

Hint:

First, calculate the aggregate marks by summing up the marks of the five subjects. Then, calculate the percentage using the formula:
Percentage = (Aggregate Marks / 500) × 100

Problem 5: Calculate the Cost Price of One Item

Description:

Write a C program that takes the total selling price of 15 items and the total profit earned on them as input. The program should calculate and print the cost price of one item.

Hint:

First, calculate the total cost price by subtracting the total profit from the total selling price. Then, divide the total cost price by 15 to get the cost price of one item.