

EX -1 (Week 1)

1. Anu's basic salary is the input. Her dearness allowance is 20% of basic salary and house rent is 20% of basic salary. Write a program to calculate her gross salary.
2. The distance between two cities (in km.) is the input. Write a program to convert and print the distance in meters, feet, inches and centimeters.
3. Temperature of city in Fahrenheit degrees is the input. Write a program to convert the temperature into centigrade degrees.
4. The length and breadth of a rectangle and radius of a circle are the inputs. Write a program to calculate the area and perimeter of the rectangle and the area and circumference of the circle.
5. Write a program to receive values of latitude(L1, L2) and longitude (G1, G2) in degrees, of two places on the earth and output the distance (D) between them in miles. The formula for distance in miles is:
$$D = 3963 \cos^{-1} (\sin L1 \sin L2 + \cos L1 \cos L2 \cos(G2 - G1))$$
6. Wind chill factor is the felt air temperature on exposed skin due to wind. The wind chill temperature is always lower than the air temperature and is calculated the following formula: $wcf = 35.74 + 0.6215t + (0.4275t - 35.75) * v^{0.16}$
Where t is the temperature and v is the wind velocity. Write a program to receive values of t and v and calculate wind chill factor.