

Computer Programming Assignment based on Operators

Problem 1: (Convert Celsius to Fahrenheit) Write a program that reads a Celsius degree in a double value from the console, then converts it to Fahrenheit and displays the result. The formula for the conversion is as follows:

Fahrenheit = (9 / 5) * Celsius + 32;

Problem 2: (Compute the volume of a cylinder) Write a program that reads in the radius and length of a cylinder and computes the area and volume using the following Formulas:

Area = radius * radius * pi

Volume = area * length

Problem 3: (Find the number of years) Write a program that prompts the user to enter the Minutes (e.g., 1 billion), and displays the number of years and days for the minutes. For simplicity, assume a year has 365 days.

Problem 4: (Knowledge of if else statement required)

1. Prompt the user "Enter your weight (in kgs)" and record weight.
2. Prompt the user "What is your preferred unit of height? Type "F" for feet and "M" for meters" and record the preference.
3. If user says "F" then prompt user "You will enter your height given as feet and inches. First enter feet" and record feet and then prompt user "Now enter inches" and record inches.
4. If user says "M" then prompt user "What is your height in meters" and record height in meters.
5. If user had chosen "F" then convert height into meters.
6. Compute BMI using the following formula.

$$\text{BMI} = \frac{\text{Weight (in kgs)}}{\text{Height}^2(\text{in m})}$$

7. Depending on the value of BMI, report the user's type given by the following table:

- BMI < 18.5 : UNDERWEIGHT
- 18.5 <= BMI < 25 : NORMAL
- 25 <= BMI < 30 : OVERWEIGHT
- BMI > 30 : VERY-OVERWEIGHT

Problem 5: (Geometry: distance of two points) Write a program that prompts the user to enter two points (x1, y1) and (x2, y2) and displays their distance between them.(Hint: use the formula for compute the distance between the two points)