Programming In C #2

Dated: 2025-03-29

Attempt any all questions.

1. Input three different integers (a, b, c) and output the minimum (min) of them. Required variables are declared as int. Use the conditional operator (?:) to compare two numbers.
(Execution example)
Enter three integers: 75 16 80
Minimum of 75, 16, 80: 16

2. Input a positive integer (x), convert it to 2's complement (x2), and output it in decimal and hexadecimal.
Declare the required variables as int. When outputting in hexadecimal, use the format specifier %0X.
(Execution example)
Enter a positive integer: 25
Display the 2's complement of "25" in decimal: -25
Display the 2's complement of "25" in hexadecimal: FFFFFFE7

3. Write a C program that:

1. Asks the user to input the three sides of a triangle.
2. Checks whether the three sides form a valid triangle using the triangle inequality theorem.
3. If the sides form a valid triangle, classify the triangle as:
    - Equilateral if all three sides are equal.
    - Isosceles if exactly two sides are equal.
    - Scalene if all three sides are different.
4. If the sides do not form a valid triangle, print "Invalid Triangle.

4. Input an integer (x) less than 10,000 and output the integer's units (n1), tens (n10), hundreds (n100), and thousands (n1000) digits in that order. Declare the required variables

as int. (Execution example)
Enter an integer less than 10,000: 2025
Ones digit: 5
Tens digit: 2
Hundreds digit: 0
Thousands digit: 2

5. Write a program in C that takes decimal number as input from the user and prints it's binary equivalent.

6. Write a program that takes character string as input from the user and encrypts it. Create a new variable and decrypt it while printing its original value.

7. Write a simple calculator program in C that performs basic arithmetic operations: addition, subtraction, multiplication, and division. The program should:

1. Accept two numbers and an operation symbol (+, -, *, /) from the user.
2. Perform the corresponding arithmetic operation based on the input operation symbol.
3. Check if the user inputs a valid operation symbol. If the user enters an invalid operation (other than +, -, *, /), display an error message and ask the user to enter a valid operation.
4. Do not handle division by zero. If the user tries to divide by zero, the program should simply proceed with the division operation without checking for this case.
5. Print the result of the operation