MINDFULAI EDU

PRACTICE QUESTIONS

DAY 1

1.Write a python program that takes user input for two numbers and performs the operations listed below

- Calculate the sum, difference, product and division of two numbers
- Determines if the first number is greater than, less than or equal to the second number
- Checks if the first number is even or odd
- Utilizes loops to repeatedly asks the user for input until they choose to exist the program
- Use conditional statements and performs type casting

2.Write a python program that takes user input for 3 sides of a triangle and performs the operations listed below

- Calculate the perimeter and area of the triangle
- Check whether the triangle is valid (the sum of the length of any two sides must be greater than the length of the third side)
- If the triangle is valid determine whether it is equilateral or isosceles or scalene

3.Write a python program for a simple banking system. The program should

- Allows users to access their account with a pin (‘1234’)
- Display options to check the account balance, deposit money, withdraw money or exit the program
- Limit PIN attempts to 3 if it is greater that 3 lock the account

4.Write a python program that takes the dimensions of the shape (length, width, height) as input and determines whether it is triangle, rectangle, square or cube. The program should validate the input and classify the shape accordingly

- Ensure that the user input for dimension is valid (The length, width and height should be positive numbers)

- If all 3 dimensions are equal it is a cube, if only two dimensions are equal, it is a rectangle or square, if none of the dimensions are equal, it is a triangle
- If it is a triangle find the area of the triangle

5.write a python program that takes a sentence as input and determines the type of sentence (declarative, interrogative, exclamatory) and count the number of vowels and consonants in the sentence

- Determine the type of sentence based on the punctuation at the end of the sentence. Here are the classifications:
  - Declarative: Ends with (.)
  - Interrogative: Ends with (?)
  - Exclamatory: Ends with (!)
- Consider both upper case and lower case and exclude special characters