Instructions:

1. Write clean, readable code with meaningful variable and method names.
2. Test your code with different inputs before submitting.
3. Push your solution to a GitHub repository and share the link with your mentor via email.

Part 1: Enums

Q1 : Day of the Week

Create an enum called **DayOfWeek** with values: Saturday, Sunday, Monday, Tuesday, Wednesday, Thursday, Friday.

Then write a program that:

- Asks the user to enter a day number (0–6).
- Converts it to the enum and prints the day name.
- Uses a switch statement to print whether it's a "Workday" or a "Weekend".

Output :

```
Enter a day number (1-7): 1
    Day: Saturday
    It's the Weekend

    Enter a day number (1-7): 3
    Day: Monday
    It's a Workday
```

Part 2: Arrays

Q1 : Array Statistics

Write a program that:

- Asks the user for the size of an integer array.
- Reads the elements from the user.
- Prints: the sum, the average, the maximum value, the minimum value, and the array in reverse order.

Hint: *Do NOT use built-in methods like Array.Max(). Use loops.*

Output :

```
Enter array size: 5
Enter element [0]: 10
Enter element [1]: 25
Enter element [2]: 3
Enter element [3]: 47
Enter element [4]: 12

Sum     = 97
Average = 19.4
Max     = 47
Min     = 3
Reverse = 12, 47, 3, 25, 10
```

Q2 : Student Grades Matrix

You have **3 students**, each with **4 subject grades**. Store them in a 2D array.

Write a program that:

- Reads grades from the user into a [3, 4] array.
- Prints each student's average grade.
- Prints the overall class average.

Part 3: Functions (Methods)

Q1 : Basic Calculator Functions

Write four static methods: **Add**, **Subtract**, **Multiply**, **Divide**.

Each takes two double parameters and returns a double result.

In Main, ask the user for two numbers and an operation (+, -, *, /), then call the appropriate method and display the result.

Handle division by zero gracefully.

ROUTE

Q2 : Circle Calculator with out

Write a method **CalculateCircle** that takes a double radius as input and returns **both** the area and circumference using **out** parameters.

Call the method from Main, then print both results.

Create a new Console Application project

Build a mini Student Grade Manager that combines all three topics.

Requirements:

- **Enum:** Create a Grade enum with values: A, B, C, D, F.
- **Array:** Use an int[] array to store scores for 5 students.
- **Functions:** Write the following methods:

  a) Method To GetGrade returns the grade enum based on score (A >= 90, B >= 80, C >= 70, D >= 60, F < 60).

  b) Method To CalculateAverage returns the average of all scores.

  c) Method To GetMinMax finds the min and max scores using out.

The program should:

- Read 5 student scores from the user.
- Print each student's score and corresponding letter grade.
- Print the class average, minimum, and maximum scores.

Output :

```
Enter score for Student 1: 95
Enter score for Student 2: 82
Enter score for Student 3: 67
Enter score for Student 4: 74
Enter score for Student 5: 55

--- Report ---
Student 1: 95 -> Grade: A
Student 2: 82 -> Grade: B
Student 3: 67 -> Grade: D
Student 4: 74 -> Grade: C
Student 5: 55 -> Grade: F

Average: 74.6
Highest Score: 95
```