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Title

Cricket Match Score Tracking System with Exception Handling

Question No : 1 / 1

Problem Statement

You are required to develop a **C# console application** that simulates a simple **cricket match score tracking system**.
The application allows the user to input scores of players, validates the scores, and calculates the **total score of the cricket team**.

The application should handle various exceptions that may arise during the **input and processing of scores**.

Write the solution within the **Program.cs** file.

Requirements

All classes must be public.

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1. Class: CricketMatch

Properties

- `int[] playerScores`
  → An array to store scores of **up to 5 players**
- `int currentIndex`
  → Tracks the number of scores added

Methods

- `void AddPlayerScore(int score)`
  - Adds a player's score to the array
  - Throws:
    - `ArgumentException`
      → If score is **less than 0 or greater than 50**
      → Message:
    - `Invalid score. Score must be between 0 and 50.`
    - `InvalidOperationException`
      → If more than **5 scores** are added
      → Message:
    - `Cannot add more than 5 player scores.`
- `int CalculateTotalScore()`
  - Calculates and returns the **total team score**

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2. Class: Program

Main Method Responsibilities

- Reads space-separated player scores from console input
- Adds each score using `AddPlayerScore`
- Displays the total score using `CalculateTotalScore`
- Handles the following exceptions:
  - `ArgumentException`
  - `InvalidOperationException`

Exception Handling Rules

- For **more than 5 scores**
- `throw new InvalidOperationException("Cannot add more than 5 player scores.");`
- For **invalid score values**
- `throw new ArgumentException("Invalid score. Score must be between 0 and 50.");`

Input Format

- The first line of input should be **space-separated integers** representing player scores.

Output Format

- If number of players ≤ 5 and all scores are valid:
- `Total score of the cricket team: {calculatedTotalScore}`
- If number of scores > 5:
- `Error: Cannot add more than 5 player scores.`
- If any score is invalid:
- `Error: Invalid score. Score must be between 0 and 50.`

Test Cases

Test Case ID	Input	Expected Output
TC01	`1 2 3 4`	Total score of the cricket team: 10
TC02	`1 2 3 4 5`	Total score of the cricket team: 15
TC03	`1 2 3 4 5 6`	Error: Cannot add more than 5 player scores.
TC04	`40 -1 20`	Error: Invalid score. Score must be between 0 and 50.
TC05	`60 10`	Error: Invalid score. Score must be between 0 and 50.

Sample Input 1

```
1 2 3 4
```

Sample Output 1

```
Total score of the cricket team: 10
```

Sample Input 2

```
1 2 3 4 5 6
```

Sample Output 2

```
Error: Cannot add more than 5 player scores.
```

Sample Input 3

```
40 -1 24
```

Sample Output 3

```
Error: Invalid score. Score must be between 0 and 50.
```

C# Solution (Program.cs)

```
class CricketMatch
{
    public int[] playerScores;
    public int currentIndex;

    public CricketMatch()
    {
        playerScores = new int[5];
        currentIndex =  0;
    }

    public void AddPlayerScore(int score)
    {
        if (score<0 || score > 50)
        {
            throw new ArgumentException("Invalid score. Score must be between 0 and 50.");
        }
        if (currentIndex >= 5)
        {
            throw new InvalidOperationException("Cannot add more than 5 player scores.");
        }
        playerScores[currentIndex] = score;
        currentIndex++;
```

```
    }
    public int  CalculateTotalScore()
    {
        int total = 0;
        for (int i = 0; i < currentIndex; i++)
        {
            total += playerScores[i];
        }
        return total;
    }
}
class Program
{
    static void Main()
    {
        try{
            CricketMatch cm = new CricketMatch();
            string input = Console.ReadLine()??"";
            string[] values = input.Split(' ');

            foreach (string val in values)
            {
                int score = Convert.ToInt32(val);
                cm.AddPlayerScore(score);
```

```
            }
            int totalScore = cm.CalculateTotalScore();
            Console.WriteLine("Total score of the cricket team: " + totalScore);
        }
        catch (ArgumentException ex)
        {
            Console.WriteLine("Error: " + ex.Message);
        }
        catch (InvalidOperationException ex)
        {
            Console.WriteLine("Error: " + ex.Message);
        }
    }
}
```