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Title

Cricket Match Score Tracking System with System 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 the **scores of players**, validates the scores, and then 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.

1. Class: CricketMatch

Properties

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

Methods

AddPlayerScore(int score)

- Adds a player's score to the array
- Throws the following exceptions:
 - **ArgumentException**
 - If score is **less than 0 or greater than 50**
 - Error message:
 - Invalid score. Score must be between 0 and 50.
 - **InvalidOperationException**
 - If more than **5 scores** are added
 - Error message:
 - Cannot add more than 5 player scores.

CalculateTotalScore()

- Calculates and returns the **total score** of the cricket team
-

2. Class: Program

Main Method Responsibilities

- Reads **space-separated scores** from console input
 - Adds each score using `AddPlayerScore`
 - Calculates and displays the total score using `CalculateTotalScore`
 - Handles and displays error messages for:
 - `ArgumentException`
 - `InvalidOperationException`
-

Exception Handling Rules

- For adding 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 the player scores.

Output Format

- If number of players ≤ 5 and all scores are valid:
 - Total score of the cricket team: {calculatedTotalScore}
 - If more than 5 scores are entered:
 - 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.
```

```
using System;

public class CricketMatch
{
    public int[] playerScores = new int[5];
    public int 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;  
}  
}
```

```
public class Program  
{  
    public static void Main()  
    {  
        try  
        {  
            CricketMatch match = new CricketMatch();  
  
            string input = Console.ReadLine();  
            string[] values = input.Split(' ');  
  
            foreach (string val in values)  
            {  
                int score = int.Parse(val);  
                match.AddPlayerScore(score);  
            }  
        }  
    }  
}
```

```
    }

    int totalScore = match.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);

}

}

}
```