

12214994_SaurabhRana

Title

Movie Ticket Cost Calculation with Exception Handling

Question No : 1 / 1

Problem Statement

You are required to develop a **C# console application** that calculates the **total cost of movie tickets** based on the **number of tickets purchased** and their **price per ticket**.

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

The program should be written within the **Program class** in the **Program.cs** file.
All classes must be public.

Requirements

1. Class: Program

Main Method

- Reads the **number of tickets** (integer) from the console.
- Reads the **price per ticket** (decimal) from the console.
- Validates inputs:
 - Number of tickets must be **greater than 0**
 - Throw ArgumentException with message
 - Number of tickets must be greater than 0.
 - Price per ticket must be **greater than 0**
 - Throw ArgumentException with message
 - Price per ticket must be greater than 0.
- Calculates total cost using the formula:
- $\text{totalCost} = \text{numberOfTickets} \times \text{pricePerTicket}$
- Displays the total ticket cost.

- Handles and displays appropriate error messages for:
 - ArgumentException
 - FormatException
 - Exception (generic)
-

Input Format

- First line: Number of tickets (**integer**)
 - Second line: Price per ticket (**decimal**)
-

Output Format

- If both inputs are valid:
 - Total ticket cost: {totalCost}
 - If number of tickets is zero or negative (ArgumentException):
 - Error: Number of tickets must be greater than 0.
 - If price per ticket is zero or negative (ArgumentException):
 - Error: Price per ticket must be greater than 0.
 - If input is not a valid number (FormatException):
 - Error: Please enter a valid number.
-

Test Cases

Test Case ID	Input	Expected Output
TC01	5, 12.5	Total ticket cost: 62.5
TC02	0, 15	Error: Number of tickets must be greater than 0.
TC03	3, -10	Error: Price per ticket must be greater than 0.
TC04	4, abc	Error: Please enter a valid number.

Sample Input 1

5
12.5

Sample Output 1

Total ticket cost: 62.5

Sample Input 2

0
15

Sample Output 2

Error: Number of tickets must be greater than 0.

Sample Input 3

3
-10

Sample Output 3

Error: Price per ticket must be greater than 0.

Sample Input 4

4
abc

Sample Output 4

Error: Please enter a valid number.

Assessment Coverage

- ✓ Input validation
- ✓ ArgumentException handling
- ✓ FormatException handling
- ✓ Arithmetic logic
- ✓ Console I/O
- ✓ Capgemini evaluation standard

```
public class Program

{
    public static void Main()
    {
        try
        {
            int numberOfTickets = int.Parse(Console.ReadLine());

            if (numberOfTickets <= 0)
                throw new ArgumentException("Error: Number of tickets must be greater than 0.");

            decimal pricePerTicket = decimal.Parse(Console.ReadLine());

            if (pricePerTicket <= 0)
                throw new ArgumentException("Error: Price per ticket must be greater than 0.");

            decimal totalCost = numberOfTickets * pricePerTicket;

            Console.WriteLine($"Total ticket cost: {totalCost}");
        }
        catch (ArgumentException ex)
        {
            Console.WriteLine(ex.Message);
        }
        catch (FormatException)
        {
        }
    }
}
```

```
{  
    Console.WriteLine("Error: Please enter a valid number.");  
}  
  
catch (Exception)  
{  
    Console.WriteLine("Error: Please enter a valid number.");  
}  
}  
}
```