

# Rajalakshmi Engineering College

Name: Bhargav Venkat DC  
Email: 241001032@rajalakshmi.edu.in  
Roll no: 241001032  
Phone: 9884969277  
Branch: REC  
Department: IT - Section 1  
Batch: 2028  
Degree: B.E - IT

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## 2024\_28\_III\_OOPS Using Java Lab

### 2028\_REC\_OOPS using Java\_Week 8\_Q2

Attempt : 1  
Total Mark : 10  
Marks Obtained : 10

#### Section 1 : Coding

##### 1. Problem Statement

Elsa, a busy professional, is using a scheduling application to plan her meetings efficiently. The application requires users to input meeting durations in minutes, ensuring that the duration is a positive integer and does not exceed 240 minutes (4 hours). Elsa needs a program to assist her in scheduling meetings securely with proper exception handling.

Create a Java class named `ElsaMeetingScheduler`. Implement a custom exception: `InvalidDurationException` for invalid meeting duration entries. Implement the main method to interactively take user input for a meeting duration. Implement the `validateMeetingDuration` method to validate the meeting duration based on the specified rules and throw a custom exception if the validation fails. Print appropriate success or error messages based on the meeting duration.

Implement a custom exception, `InvalidDurationException`, to handle cases where the entered meeting duration does not meet the specified criteria.

### ***Input Format***

The input consists of an integer value 'n', representing the meeting duration.

### ***Output Format***

The output is displayed in the following format:

If the entered meeting duration meets the specified criteria, the program outputs

"Meeting scheduled successfully!"

If the entered meeting duration is invalid, the program outputs an error message indicating the issue.

"Error: Invalid meeting duration. Please enter a positive integer not exceeding 240 minutes (4 hours)."

Refer to the sample output for formatting specifications.

### ***Sample Test Case***

Input: 120

Output: Meeting scheduled successfully!

### ***Answer***

```
import java.util.Scanner;

class InvalidDurationException extends Exception {
    public InvalidDurationException(String message) {
        super(message);
    }
}

class ElsaMeetingScheduler {
    public static void validateMeetingDuration(int duration) throws
    InvalidDurationException {
```

```
        if (duration <= 0 || duration > 240) {  
            throw new InvalidDurationException("Invalid meeting duration. Please  
enter a positive integer not exceeding 240 minutes (4 hours).");  
        }  
    }  
}
```

```
public static void main(String[] args) {  
    Scanner scanner = new Scanner(System.in);  
  
    int duration = scanner.nextInt();  
  
    try {  
        validateMeetingDuration(duration);  
        System.out.println("Meeting scheduled successfully!");  
    } catch (InvalidDurationException e) {  
        System.out.println("Error: " + e.getMessage());  
    } catch (Exception e) {  
        // Catch any unexpected input errors (like non-integer)  
        System.out.println("Error: Invalid meeting duration. Please enter a positive  
integer not exceeding 240 minutes (4 hours).");  
    } finally {  
        scanner.close();  
    }  
}  
}
```

**Status :** Correct

**Marks :** 10/10