

# Rajalakshmi Engineering College

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

### 2028\_REC\_OOPS using Java\_Week 8\_Q3

Attempt : 1  
Total Mark : 10  
Marks Obtained : 10

#### Section 1 : Coding

##### 1. Problem Statement

In a user registration system, there is a requirement to implement a username validation module. Users attempting to register must adhere to specific criteria for their usernames to be considered valid.

Your task is to develop a program that takes user input for a desired username and validates it according to the following rules:

The username must not contain any spaces. The username must be at least 5 characters long.

Implement a custom exception, `InvalidUsernameException`, to handle cases where the entered username does not meet the specified criteria.

##### ***Input Format***

The input consists of a string S, representing the desired username.

### **Output Format**

If the username is valid, print "Username is valid: [S]".

If the username is invalid:

1. If the username is short, print "Invalid Username: Username must be at least 5 characters long"
2. If the username contains spaces, print "Invalid Username: Username cannot contain spaces"

Refer to the sample output for formatting specifications.

### **Sample Test Case**

Input: John

Output: Invalid Username: Username must be at least 5 characters long

### **Answer**

```
// You are using Java
import java.util.*;
```

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

```
class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String username = sc.nextLine();
        sc.close();

        try {
            validateUsername(username);
            System.out.println("Username is valid: " + username);
        } catch (InvalidUsernameException e) {
            System.out.println(e.getMessage());
        }
    }

    static void validateUsername(String username) {
        if (username.length() < 5) {
            throw new InvalidUsernameException("Invalid Username: Username must be at least 5 characters long");
        }
        if (username.contains(" ")) {
            throw new InvalidUsernameException("Invalid Username: Username cannot contain spaces");
        }
    }
}
```

```
    }  
    }  
  
    static void validateUsername(String username) throws  
    InvalidUsernameException {  
        if (username.contains(" ")) {  
            throw new InvalidUsernameException("Invalid Username: Username  
cannot contain spaces");  
        } else if (username.length() < 5) {  
            throw new InvalidUsernameException("Invalid Username: Username must  
be at least 5 characters long");  
        }  
    }  
}
```

**Status :** Correct

**Marks :** 10/10