

# Rajalakshmi Engineering College

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

### 2028\_REC\_OOPS using Java\_Week 8\_Q5

Attempt : 1  
Total Mark : 10  
Marks Obtained : 10

#### Section 1 : Coding

##### 1. Problem Statement

In a file management system, users are required to provide a valid file name when creating new files. The system enforces specific rules for file names to maintain consistency and avoid potential issues. Your task is to implement a Java program named `FileNameValidator` that takes user input for a file name and validates it according to the specified rules.

Rules for Valid File Name:

The file name must consist of alphanumeric characters (letters and digits) only. The file name must have a minimum length of 3 characters.

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

***Input Format***

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

### **Output Format**

The output is displayed in the following format:

If the entered file name meets the specified criteria, the program outputs

"Valid file name"

If the entered file name does not meet the criteria and triggers the `InvalidFileNameException`, the program outputs

"Error: Invalid file name. It must be alphanumeric and have a minimum length of 3 characters."

Refer to the sample output for formatting specifications.

### **Sample Test Case**

Input: myfile123

Output: Valid file name

### **Answer**

```
import java.util.*;

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

public class Main{
    public static void validateFileName(String file) throws
InvalidFileNameException{
        if(file.length() < 3){
            throw new InvalidFileNameException("Invalid file name. It must be
alphanumeric and have a minimum length of 3 characters.");
        }
        if(!file.matches("[A-Za-z0-9]+")){
            throw new InvalidFileNameException("Invalid file name. It must be
```

```
alphanumeric and have a minimum length of 3 characters.");
    }
}

public static void main(String[] args){
    Scanner sc = new Scanner(System.in);
    String file = sc.nextLine();

    try{
        validateFileName(file);
        System.out.println("Valid file name");
    }
    catch(InvalidFileNameException e){
        System.out.println("Error: " + e.getMessage());
    }

}
}
```

**Status :** Correct

**Marks : 10/10**