

# 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
{
    InvalidFileNameException(String msg)
    {
        super(msg);
    }
}
class FilenameChecker
{
    public static void main(String[] args)
    {
        Scanner scan=new Scanner(System.in);
        String file=scan.nextLine();
        try{
            validateFileName(file);
            System.out.println("Valid file name");
        }
    }
}
```

```

    }
    catch(InvalidFileNameException e)
    {
        System.out.println("Error: "+e.getMessage());
    }
}

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.");
    }
    for(int i=0;i<file.length();i++)
    {
        char ch=file.charAt(i);
        if(!Character.isLetterOrDigit(ch))
        {
            throw new InvalidFileNameException("Invalid file name. It must be
alphanumeric and have a minimum length of 3 characters.");
        }
    }
}
}

```

**Status :** Correct

**Marks :** 10/10