

# Rajalakshmi Engineering College

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Batch: 2028

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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.Scanner;  
class InvalidFileNameException extends Exception  
{
```

```
    public InvalidFileNameException(String message)
```

```
{
```

```
    super(message);
```

```
}
```

```
}

class FileNameValidator

{



    public static void validateFileName(String fileName) throws
    InvalidFileNameException

    {

        if (fileName.length() < 3 || !fileName.matches("[a-zA-Z0-9]+"))

            throw new InvalidFileNameException("Error: 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 fileName = sc.nextLine();
    try

    {

        validateFileName(fileName);
        System.out.println("Valid file name");
    }
}
```

```
        } catch (InvalidFileNameException e)
        {
            System.out.println(e.getMessage());
        }
    }
}
```

**Status : Correct**

**Marks : 10/10**