

# 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\_Q1

Attempt : 1

Total Mark : 10

Marks Obtained : 10

#### **Section 1 : Coding**

##### **1. Problem Statement**

Write a program to validate the email address and display suitable exceptions if there is any mistake.

Create 3 custom exception classes as below

DotExceptionAtTheRateExceptionDomainException

A typical email address should have a ". " character, and a "@" character, and also the domain name should be valid. Valid domain names for practice be 'in', 'com', 'net', or 'biz'.

Display Invalid Dot usage, Invalid @ usage, or Invalid Domain message based on email id.

Get the email address from the user, validate the email by checking the

above-mentioned criteria, and print the validity status of the input email address.

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

The first line of input contains the email to be validated.

#### ***Output Format***

The output prints a Valid email address or an Invalid email address along with the suitable exception

If email ends with . or contains not exactly one . after @, it throws:

DotException: Invalid Dot usage

Invalid email address

If @ appears not exactly once, it throws:

AtTheRateException: Invalid @ usage

Invalid email address

If the part after the last dot is not among accepted domains:

DomainException: Invalid Domain

Invalid email address

If all conditions satisfied then print:

Valid email address

Refer to the sample input and output for format specifications.

### **Sample Test Case**

Input: sample@gmail.com

Output: Valid email address

### **Answer**

```
import java.util.Scanner;

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

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

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

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

        try {
            // Check '@' usage
            if (email.indexOf('@') == -1 || email.indexOf('@') != email.lastIndexOf('@')) {
                throw new AtTheRateException("AtTheRateException: Invalid @
usage");
            }
        }
    }
}
```

```
// Check '.' usage
int atIndex = email.indexOf('@');
if (!email.substring(atIndex + 1).contains(".")) || email.endsWith(".")) {
    throw new DotException("DotException: Invalid Dot usage");
}

// Check domain
String domain = email.substring(email.lastIndexOf('.') + 1);
if (!(domain.equals("com") || domain.equals("in") || domain.equals("net") || domain.equals("biz")))) {
    throw new DomainException("DomainException: Invalid Domain");
}

// If all checks passed
System.out.println("Valid email address");

} catch (AtTheRateException | DotException | DomainException e) {
    System.out.println(e.getMessage());
    System.out.println("Invalid email address");
}
}
```

**Status : Correct**

**Marks : 10/10**