

# Rajalakshmi Engineering College

Name: franklin b  
Email: 241801067@rajalakshmi.edu.in  
Roll no:  
Phone: 8667674133  
Branch: REC  
Department: AI & DS - Section 4  
Batch: 2028  
Degree: B.E - AI & DS

Scan to verify results



## 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

DotException  
AtTheRateException  
DomainException

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.*;

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

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

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

class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String email = sc.nextLine();
        try {
            validate(email);
            System.out.println("Valid email address");
        } catch (Exception e) {
            System.out.println(e.getMessage());
            System.out.println("Invalid email address");
        }
    }
}
```

```

static void validate(String email) throws DotException, AtTheRateException,
DomainException {
    if (email.startsWith(".") || email.endsWith("."))
        throw new DotException("DotException: Invalid Dot usage");

    int atCount = 0;
    for (char c : email.toCharArray())
        if (c == '@')
            atCount++;

    if (atCount != 1)
        throw new AtTheRateException("AtTheRateException: Invalid @ usage");

    int atIndex = email.indexOf('@');
    int dotIndex = email.lastIndexOf('.');

    if (dotIndex < atIndex + 2 || dotIndex == email.length() - 1)
        throw new DotException("DotException: Invalid Dot usage");

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

```

**Status :** Correct

**Marks :** 10/10