

# Rajalakshmi Engineering College

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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

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**

```
// You are using Java
// You are using Java
import java.util.*;
class DotException extends Exception{
    public DotException(String sentence){
        super(sentence);
    }
}
class AtTheRateException extends Exception{
    public AtTheRateException(String sentence){
        super(sentence);
    }
}
class DomainException extends Exception{
    public DomainException(String sentence){
        super(sentence);
    }
}

class customExceptions{
    public static void checkDot(String sen) throws DotException{
        if(sen.contains(".")){
            if(sen.charAt(sen.length()-1)=='.'){
                throw new DotException("Invalid Dot usage");
            }
            int count=0;
            for(int i=0;i<sen.length();i++){
                if(sen.charAt(i)=='.'){
                    count++;
                }
            }
            if(count>1){
```

```

        throw new DotException("Invalid Dot usage");
    }
    }else{
        throw new DotException("Invalid Dot usage");
    }
}

public static void checkAt(String sen) throws AtTheRateException{
    if(sen.contains("@")){
        int count=0;
        for(int i=0;i<sen.length();i++){
            if(sen.charAt(i)=='@'){
                count++;
            }
        }
        if(count>1){
            throw new AtTheRateException("Invalid @ usage");
        }
    }else{
        throw new AtTheRateException("Invalid @ usage");
    }
}

public static void checkDomain(String sen) throws DomainException{
    String sub=sen.substring(sen.indexOf(".")+1,sen.length());
    if(!(sub.equals("in")|| sub.equals("com")||sub.equals("net")||sub.equals("biz")))
{
        throw new DomainException("Invalid Domain");
    }
}

public static void main(String args[]){
    String sen;
    Scanner scanner=new Scanner(System.in);
    sen=scanner.nextLine();
    try{
        checkDot(sen);
        checkAt(sen);
        checkDomain(sen);
        System.out.println("Valid email address");
    }catch(DotException e){
        System.out.println("DotException:"+e.getMessage());
        System.out.println("Invalid email address");
    }
}

```

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

**Status :** Correct

**Marks :** 10/10