Rajalakshmi Engineering College

Name: Alvin .B
Email: 240701034@rajalakshmi.edu.in
Roll no: 240701034
Phone: 9677000577
Branch: REC
Department: CSE - Section 10
Batch: 2028
Degree: B.E - CSE

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

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

```
// You are using Java
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 validateEmail(String email) {
        try {
            if (email.startsWith(".") || email.endsWith(".") || email.startsWith("@") ||
email.endsWith("@")) {
                throw new DotException("Invalid Dot usage");
            }

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

```
        if (atCount != 1) {
            throw new AtTheRateException("Invalid @ usage");
        }

        String[] parts = email.split("@");
        if (parts.length != 2 || parts[1].indexOf('.') == -1) {
            throw new DotException("Invalid Dot usage");
        }

        String[] domainParts = parts[1].split("\\.");
        if (domainParts.length < 2 || domainParts[domainParts.length - 1].length()
< 2) {
            throw new DomainException("Invalid Domain");
        }

        String domain = domainParts[domainParts.length - 1];
        if (!(domain.equals("in") || domain.equals("com") || domain.equals("net") ||
domain.equals("biz"))) {
            throw new DomainException("Invalid Domain");
        }

        if (email.contains("..") || email.contains("@@") || email.contains(".@") ||
email.contains("@.")) {
            throw new DotException("Invalid Dot usage");
        }

        System.out.println("Valid email address");

    } catch (DotException de) {
        System.out.println("DotException: " + de.getMessage());
        System.out.println("Invalid email address");
    } catch (AtTheRateException ae) {
        System.out.println("AtTheRateException: " + ae.getMessage());
        System.out.println("Invalid email address");
    } catch (DomainException de) {
        System.out.println("DomainException: " + de.getMessage());
        System.out.println("Invalid email address");
    }
  }

  public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
```

```
        String email = sc.nextLine();
        validateEmail(email);
        sc.close();
    }
}
```

Status : Correct **Marks : 10/10**