Rajalakshmi Engineering College

Name: Kaaviya Sri PS
Email: 240701222@rajalakshmi.edu.in
Roll no: 240701222
Phone: 8838174850
Branch: REC
Department: CSE - Section 6
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

```
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();
      sc.close();

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

```
        }
    }

    public static void validateEmail(String email) throws DotException,
AtTheRateException, DomainException {
        int atCount = email.length() - email.replace("@", "").length();
        if (atCount != 1) {
            throw new AtTheRateException("AtTheRateException: Invalid @ usage");
        }

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

        if (dotIndex == -1 || dotIndex < atIndex || email.endsWith(".")) {
            throw new DotException("DotException: Invalid Dot usage");
        }

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

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