Rajalakshmi Engineering College

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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 {
   DotException(String m) {
      super(m);
   }
}

class AtTheRateException extends Exception {
   AtTheRateException(String m) {
      super(m);
   }
}

class DomainException extends Exception {
   DomainException(String m) {
      super(m);
   }
}

public class Main {
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
      String email = sc.nextLine();
      try {
         if (email.startsWith(".") || email.endsWith("."))
            throw new DotException("DotException: Invalid Dot usage");

         int atCount = email.length() - email.replace("@", "").length();
         if (atCount != 1)
            throw new AtTheRateException("AtTheRateException: Invalid @
usage");
```

```
        int atIndex = email.indexOf("@");
        int lastDot = email.lastIndexOf(".");

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

        String domain = email.substring(lastDot + 1);

        if (!(domain.equals("in") || domain.equals("com") || domain.equals("net") ||
domain.equals("biz")))
            throw new DomainException("DomainException: Invalid Domain");

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

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

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