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

{

   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);


}

}

class Main

{


    public static void validateemail(String email) throws DotException,
AtTheRateException, DomainException

{


        int atcount = 0;
        int atindex = -1;
        for (int i = 0; i < email.length(); i++)

{


            if (email.charAt(i) == '@')

{
        atcount++;
        atindex = i;


}


}
    if (atcount != 1)

{


      throw new AtTheRateException("Invalid @ usage");


}
    if (email.endsWith("."))

{


      throw new DotException("Invalid Dot usage");


}
    int lastdotindex = email.lastIndexOf('.');
    if (lastdotindex == -1 || lastdotindex < atindex)

{


      throw new DomainException("Invalid Domain");


}
    String domain = email.substring(lastdotindex + 1);

    if (!(domain.equals("in") || domain.equals("com") || domain.equals("net") ||
domain.equals("biz")))
```

```
{

            throw new DomainException("Invalid Domain");

}

}
    public static void main(String[] args)
{

        Scanner sc = new Scanner(System.in);
        String email = sc.nextLine();
        try

{

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

} catch (AtTheRateException | DomainException | DotException e)
{

            System.out.println(e);
            System.out.println("Invalid email address");

}

}
```

```
}
```

Status : Correct *Marks : 10/10*