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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

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.*;

class DotException extends Exception
{
   DotException(String str)
   {
      super(str);
   }
}
class DomainException extends Exception
{
    DomainException(String str)
   {
      super(str);
   }
}
class AtTheRateException extends Exception
{
   AtTheRateException(String str)
   {
      super(str);
   }
}
class Main{
   static int check(String a) throws
DotException,AtTheRateException,DomainException
   {
      int f=1;

      String []x = a.split("@");
      if(x.length==2){
```

```
        long count1 = x[0].chars().filter(ch ->ch == '.').count();
        long count2 = x[1].chars().filter(ch ->ch == '.').count();

        if(!(count1==0)){
           f=0;
           throw new DomainException("Invalid Domain");
        }
        if(!(count2==1)){
           f=0;
           throw new DotException("Invalid Dot usage");
        }
        if(!(a.endsWith("in")|| a.endsWith("com")||a.endsWith("net")||
a.endsWith("biz")))
        {
           f=0;
           throw new DomainException("Invalid Domain");
        }
      }
      else{
         f=0;
         throw new AtTheRateException("Invalid @ usage");

      }


     return f==1?1:0;
   }
   public static void main(String[] args)
   {
      Scanner sc=new Scanner(System.in);
      String a=sc.nextLine();
      try{
          if(check(a)==1)
          {
            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**