Rajalakshmi Engineering College

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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 m){
      super(m);
   }
}
class AtTheRateException extends Exception{
   AtTheRateException(String m){
      super(m);
   }
}
class DomainException extends Exception{
   DomainException(String m){
      super(m);
   }
}
public class Main{
   static void emailvalidator(String s) throws
DotException,AtTheRateException,DomainException{
      int cdot=0,cAt=0;
      for(int i=0;i<s.length();i++){
         if(s.charAt(i)=='.'){
            cdot++;
         }
         if(s.charAt(i)=='@'){
            cAt++;
         }
      }
      int dotindex=s.indexOf('.');
      int atindex=s.indexOf('@');
      if(cdot>1 || (atindex>dotindex)){
         throw new DotException("Invalid Dot usage");
      }
      if(cAt>1){
         throw new AtTheRateException("Invalid @ usage");
      }
      int lastDotIndex=s.lastIndexOf('.');
      String s1 = s.substring(lastDotIndex + 1);
      if(!(s1.equals("in")||s1.equals("com")||s1.equals("net")||s1.equals("biz"))){
         throw new DomainException("Invalid Domain");
      }
   }
   public static void main(String args[]){
      Scanner in=new Scanner(System.in);
      String s=in.nextLine();
      try{
         emailvalidator(s);
         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***