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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

```
import java.util.Scanner;

class DotException extends Exception{
   public DotException(String s){
      super(s);
   }
}

class AtTheRateException extends Exception{
   public AtTheRateException(String s){
      super(s);
   }
}

class DomainException extends Exception{
   public DomainException(String s){
      super(s);
   }
}

class Main{
   public static int a=0,b=0,c=0;

   public static void dot(String s) throws DotException{
      String[] p=s.split("@");
      String s1=p[1];
      int v=0;
      for(int i=0;i<s1.length();i++){
         if(s1.charAt(i)=='.')
            v++;
      }
      {
```

```
        if(v < 1 || s.endsWith(".")){
            throw new DotException("Dot usage\nInvalid email address");
        }
        a=1;
    }
}

    public static void rate(String s) throws AtTheRateException{
        int c=0;
        for(int i=0;i<s.length();i++){
            if(s.charAt(i)=='@'){
                c++;
            }
        }
        if(c!=1){
            throw new AtTheRateException("@ usage\nInvalid email address");
        }
        b=1;
    }

    public static void domain(String s) throws DomainException{
        if(!s.endsWith("in") && !s.endsWith("com") && !s.endsWith("net") && !
s.endsWith("biz")){
            throw new DomainException("Domain\nInvalid email address");
        }
        c=1;
    }

    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        String s = sc.nextLine();

        try{
            rate(s);
            dot(s);
            domain(s);

            if(a==1 && b==1 && c==1){
                System.out.print("Valid email address");
            }
        }
        catch (DotException e){
```

```
            System.out.print("DotException: Invalid "+e.getMessage());
        }
        catch(AtTheRateException e){
            System.out.print("AtTheRateException: Invalid "+e.getMessage());
        }
        catch (DomainException e){
            System.out.print("DomainException: Invalid "+e.getMessage());
        }
    }
}
```

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