

Rajalakshmi Engineering College

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Batch: 2028

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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

DotException AtTheRateException DomainException

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);  
    }  
}
```

```
public class Main{
```

```
    public static void validateEmail(String email) throws DotException,  
    AtTheRateException, DomainException {  
        int atCount = email.length() - email.replace("@", "").length();  
        if (atCount != 1) {  
            throw new AtTheRateException("Invalid @ usage");  
        }  
    }
```

```
        String[] parts = email.split("@");  
        String localPart = parts[0];  
        String domainPart = parts[1];
```

```
        if (localPart.isEmpty() || localPart.startsWith(".") || localPart.endsWith(".") ||  
            localPart.contains("..")) {  
            throw new DotException("Invalid Dot usage");  
        }  
    }
```

```
    int dotCount = domainPart.length() - domainPart.replace(".", "").length();  
    if (dotCount != 1 || domainPart.startsWith(".") || domainPart.endsWith(".")) {  
        throw new DotException("Invalid Dot usage");  
    }  
}
```

```
String[] domainParts = domainPart.split("\\.");  
String domainExtension = domainParts[domainParts.length - 1];  
if (!domainExtension.equals("in") && !domainExtension.equals("com") &&  
    !domainExtension.equals("net") && !domainExtension.equals("biz")) {  
    throw new DomainException("Invalid Domain");  
}  
}
```

```
public static void main(String[] args) {  
    Scanner scanner = new Scanner(System.in);
```

```
    String email = scanner.nextLine();
```

```
    try {  
        validateEmail(email);  
        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");  
    } finally {  
        scanner.close();  
    }  
}
```

Status : Correct

Marks : 10/10