

CSA0976 Java Programming

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Assignment 2

1.Code:

i. Code:

```
import java.io.*;
import java.util.*;
class stringoperation1
{
    public static void main(String arg[])
    {
        String s1,s2;
        Scanner s=new Scanner(System.in);
        System.out.print("Enter String 1 :");
        s1=s.nextLine();
        System.out.print("Enter String 2 :");
        s2=s.nextLine();
        int result=s1.compareToIgnoreCase(s2);
        if(result==0)
        {
            System.out.print("Both Strings are Equal by ignoring case
difference");
        }
        else
        {
            System.out.print("Both Strings are not Equal by ignoring
case difference");
        }
    }
}
```

```

    }

}
}

```

Output:

```

Microsoft Windows [Version 10.0.22621.1265]
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C:\Users\VARUN>cd OneDrive

C:\Users\VARUN\OneDrive>cd Desktop

C:\Users\VARUN\OneDrive\Desktop>javac stringoperation1.java
error: file not found: stringoperation1.java
Usage: javac <options> <source files>
use --help for a list of possible options

C:\Users\VARUN\OneDrive\Desktop>cd java

C:\Users\VARUN\OneDrive\Desktop\java>javac stringoperation1.java

C:\Users\VARUN\OneDrive\Desktop\java>java stringoperation1
Enter String 1 :varun
Enter String 2 :hii
Both Strings are not Equal by ignoring case difference
C:\Users\VARUN\OneDrive\Desktop\java>java stringoperation1
Enter String 1 :saveetha
Enter String 2 :saveetha
Both Strings are Equal by ignoring case difference
C:\Users\VARUN\OneDrive\Desktop\java>

```

ii. Code:

```

import java.io.*;

import java.util.*;

class stringoperation2
{
    public static void main(String arg[])
    {
        String str1 = "The Quick Brown Fox Jumps Over The Lazy Dog";
        String str2 = "The Quick Brown Fox Jumps Over The Lazy Dogs";
        String end_str = "gs";
        boolean ends1 = str1.endsWith(end_str);
        boolean ends2 = str2.endsWith(end_str);

        System.out.println("\n" + str1 + "\" ends with " + "\"" + end_str + "\" = " +
ends1);

```

```

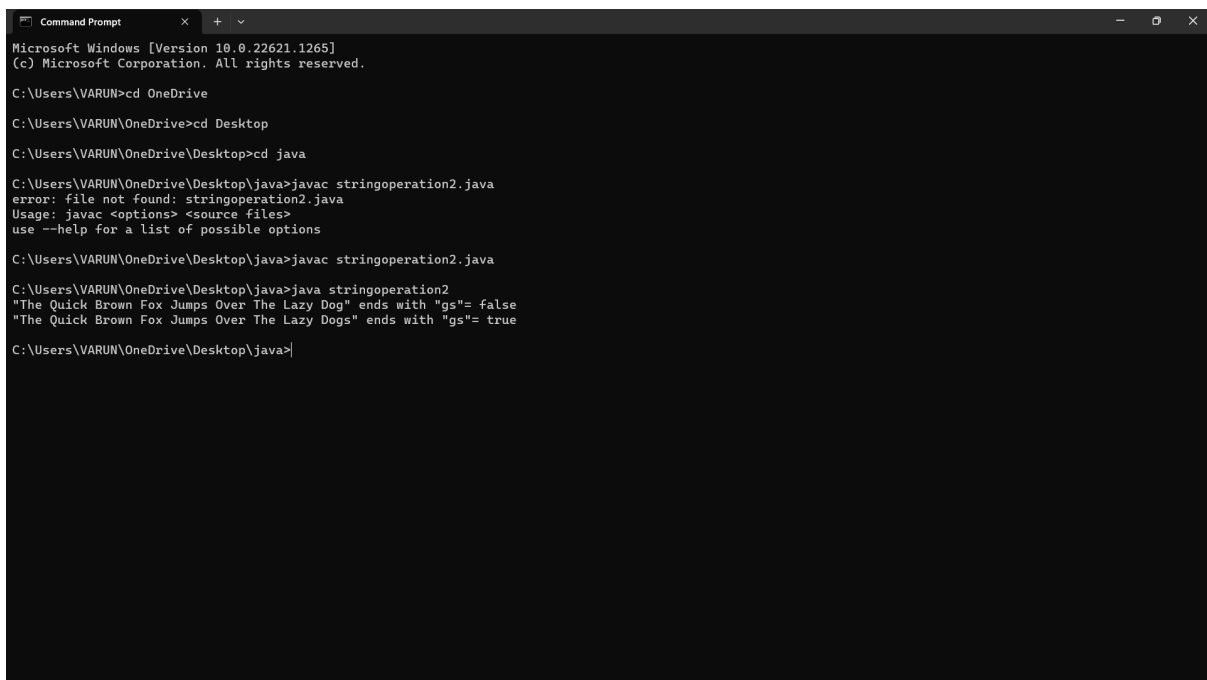
        System.out.println "\"" + str2 + "\" ends with " + "\"" + end_str + "\" = " +
ends2);

    }

}

```

Output:



```

Microsoft Windows [Version 10.0.22621.1265]
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C:\Users\VARUN>cd OneDrive

C:\Users\VARUN\OneDrive>cd Desktop

C:\Users\VARUN\OneDrive\Desktop>cd java

C:\Users\VARUN\OneDrive\Desktop\java>javac stringoperation2.java
error: file not found: stringoperation2.java
Usage: javac <options> <source files>
use --help for a list of possible options

C:\Users\VARUN\OneDrive\Desktop\java>javac stringoperation2.java

C:\Users\VARUN\OneDrive\Desktop\java>java stringoperation2
"The Quick Brown Fox Jumps Over The Lazy Dog" ends with "gs"= false
"The Quick Brown Fox Jumps Over The Lazy Dogs" ends with "gs"= true

C:\Users\VARUN\OneDrive\Desktop\java>|

```

iii. Code:

```

import java.io.*;

import java.util.*;

class stringoperation3
{

    public static void main(String arg[])

    {

        Calendar c = Calendar.getInstance();

        System.out.println("Current Date and Time :");

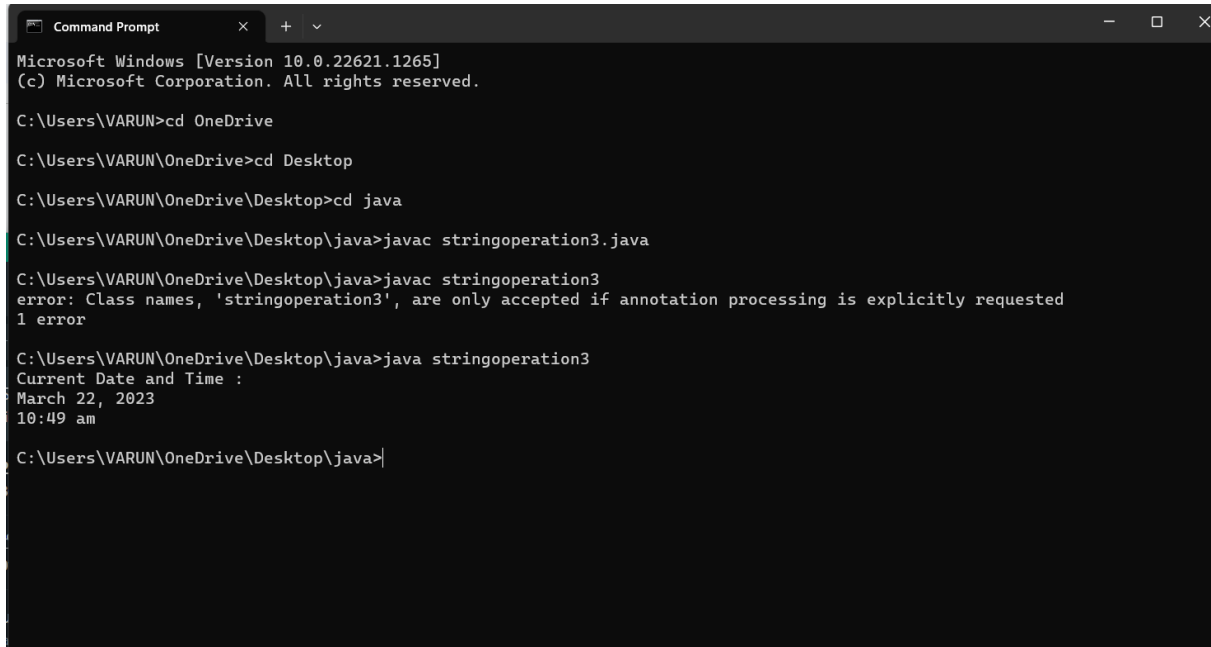
        System.out.format("%tB %te, %tY%n", c, c, c);

        System.out.format("%tl:%tM %tp%n", c, c, c);

```

```
}  
  
}
```

Output:



```
Command Prompt
Microsoft Windows [Version 10.0.22621.1265]
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C:\Users\VARUN>cd OneDrive
C:\Users\VARUN\OneDrive>cd Desktop
C:\Users\VARUN\OneDrive\Desktop>cd java
C:\Users\VARUN\OneDrive\Desktop\java>javac stringoperation3.java
C:\Users\VARUN\OneDrive\Desktop\java>javac stringoperation3
error: Class names, 'stringoperation3', are only accepted if annotation processing is explicitly requested
1 error
C:\Users\VARUN\OneDrive\Desktop\java>java stringoperation3
Current Date and Time :
March 22, 2023
10:49 am
C:\Users\VARUN\OneDrive\Desktop\java>
```

iv. Code:

```
import java.io.*;
import java.util.*;
class stringoperation4
{
    public static void main(String arg[])
    {
        String str = "The quick brown fox jumps over the lazy dog.";
        int a = str.indexOf("a", 0);
        int b = str.indexOf("b", 0);
        int c = str.indexOf("c", 0);
        int d = str.indexOf("d", 0);
        int e = str.indexOf("e", 0);
        int f = str.indexOf("f", 0);
        int g = str.indexOf("g", 0);
```

```

int h = str.indexOf("h", 0);
int i = str.indexOf("i", 0);
int j = str.indexOf("j", 0);
int k = str.indexOf("k", 0);
int l = str.indexOf("l", 0);
int m = str.indexOf("m", 0);
int n = str.indexOf("n", 0);
int o = str.indexOf("o", 0);
int p = str.indexOf("p", 0);
int q = str.indexOf("q", 0);
int r = str.indexOf("r", 0);
int s = str.indexOf("s", 0);
int t = str.indexOf("t", 0);
int u = str.indexOf("u", 0);
int v = str.indexOf("v", 0);
int w = str.indexOf("w", 0);
int x = str.indexOf("x", 0);
int y = str.indexOf("y", 0);
int z = str.indexOf("z", 0);

System.out.println(" a b c d e f g h i j");

System.out.println("=====");

System.out.println(a + " " + b + " " + c + " " + d + " " +
                    e + " " + f + " " + g + " " + h + " " +
                    i + " " + j + "\n");

System.out.println("k l m n o p q r s t");

System.out.println("=====");

System.out.println(k + " " + l + " " + m + " " + n + " " +
                    o + " " + p + " " + q + " " + r + " " +
                    s + " " + t + "\n");

```

```

System.out.println("u v w x y z");

System.out.println("=====");

System.out.println(u + " " + v + " " + w + " " + x + " " +
                    y + " " + z);

    }

}

```

Output:

The screenshot shows an IDE with several tabs: 'year.java', 'stringoperation1.java', 'stringoperation2.java', 'stringoperation3.java', and 'stringoperation4.java'. The 'year.java' tab is active, displaying the following code:

```

String str = "The quick brown fox jumps over the lazy dog.";
int a = str.indexOf("a", 0);
int b = str.indexOf("b", 0);
int c = str.indexOf("c", 0);
int d = str.indexOf("d", 0);
int e = str.indexOf("e", 0);
int f = str.indexOf("f", 0);
int g = str.indexOf("g", 0);
int h = str.indexOf("h", 0);
int i = str.indexOf("i", 0);
int j = str.indexOf("j", 0);
int k = str.indexOf("k", 0);
int l = str.indexOf("l", 0);
int m = str.indexOf("m", 0);
int n = str.indexOf("n", 0);
int o = str.indexOf("o", 0);
int p = str.indexOf("p", 0);
int q = str.indexOf("q", 0);
int r = str.indexOf("r", 0);
int s = str.indexOf("s", 0);
int t = str.indexOf("t", 0);
int u = str.indexOf("u", 0);
int v = str.indexOf("v", 0);
int w = str.indexOf("w", 0);
int x = str.indexOf("x", 0);
int y = str.indexOf("y", 0);
int z = str.indexOf("z", 0);
System.out.println(a + " " + b + " " + c + " " + d + " " + e + " " + f + " " + g + " " + h + " " + i + " " + j + " " + k + " " + l + " " + m + " " + n + " " + o + " " + p + " " + q + " " + r + " " + s + " " + t + " " + u + " " + v + " " + w + " " + x + " " + y + " " + z);
System.out.println("=====");
System.out.println(u + " " + v + " " + w + " " + x + " " + y + " " + z);

```

A Command Prompt window is open, showing the following commands and output:

```

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C:\Users\VARUN>cd OneDrive
C:\Users\VARUN\OneDrive>cd Desktop
C:\Users\VARUN\OneDrive\Desktop>cd java
C:\Users\VARUN\OneDrive\Desktop\java>javac stringoperation4.java
stringoperation4.java:48: error: reached end of file while parsing
    }
    ^
1 error

C:\Users\VARUN\OneDrive\Desktop\java>javac stringoperation4.java
C:\Users\VARUN\OneDrive\Desktop\java>java stringoperation4
a b c d e f g h i j
=====
36 10 7 40 2 16 42 1 6 20
k l m n o p q r s t
=====
8 35 22 14 12 23 4 11 24 31
u v w x y z
=====
5 27 13 18 38 37

```

v. Code:

```

import java.io.*;

import java.util.*;

class stringoperation5

{

    public static void main(String arg[])

    {

        String str = "The quick brown fox jumps over the lazy dog.";

        String new_str = str.replaceAll("fox", "cat");

        System.out.println("Original string: " + str);
    }
}

```

```

        System.out.println("New String: " + new_str);
    }
}

```

Output:

```

Microsoft Windows [Version 10.0.22621.1265]
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C:\Users\VARUN>cd OneDrive
C:\Users\VARUN\OneDrive>cd Desktop
C:\Users\VARUN\OneDrive\Desktop>cd java
C:\Users\VARUN\OneDrive\Desktop\java>javac stringoperation5.java
C:\Users\VARUN\OneDrive\Desktop\java>java stringoperation5
Original string: The quick brown fox jumps over the lazy dog.
New String: The quick brown cat jumps over the lazy dog.
C:\Users\VARUN\OneDrive\Desktop\java>

```

vi. Code:

```

import java.io.*;
import java.util.*;
class stringoperation6
{
    public static void main(String arg[])
    {
        String str = "The quick brown fox jumps over the lazy dog.";
String new_str = str.substring(10, 26);
        System.out.println("old = " + str);
        System.out.println("new = " + new_str);
    }
}

```

Output:

```
Command Prompt
Microsoft Windows [Version 10.0.22621.1265]
(c) Microsoft Corporation. All rights reserved.

C:\Users\VARUN>cd OneDrive
C:\Users\VARUN\OneDrive>cd Desktop
C:\Users\VARUN\OneDrive\Desktop>cd java
C:\Users\VARUN\OneDrive\Desktop\java>javac stringoperation6.java
C:\Users\VARUN\OneDrive\Desktop\java>java stringoperation6
old = The quick brown fox jumps over the lazy dog.
new = brown fox jumps
C:\Users\VARUN\OneDrive\Desktop\java>
```

vii. Code:

```
import java.io.*;
import java.util.*;
class stringoperation7
{
    public static void main(String arg[])
    {
        String str = " The quick brown fox jumps over the lazy dog. ";
        String new_str = str.trim();
        System.out.println("Original String: " + str);
        System.out.println("New String: " + new_str);
    }
}
```

Output:


```
Command Prompt
Microsoft Windows [Version 10.0.22621.1265]
(c) Microsoft Corporation. All rights reserved.

C:\Users\VARUN>cd OneDrive
C:\Users\VARUN\OneDrive>cd Desktop
C:\Users\VARUN\OneDrive\Desktop>cd java
C:\Users\VARUN\OneDrive\Desktop\java>javac stringoperation7.java
C:\Users\VARUN\OneDrive\Desktop\java>java stringoperation7
Original String: The quick brown fox jumps over the lazy dog.
New String: The quick brown fox jumps over the lazy dog.
C:\Users\VARUN\OneDrive\Desktop\java>
```

viii. Code:

```
import java.io.*;
import java.util.*;
class stringoperation8
{
    public static void main(String arg[])
    {
        String str = "The quick brown fox jumps over the lazy dog";
        String lowerStr = str.toLowerCase();
        System.out.println("Original String: " + str);
        System.out.println("String in lowercase: " + lowerStr);
    }
}
```

Output:

```
Command Prompt
stringoperation8.java:7: error: illegal character: '\u201c'
    String str = ?The quick brown fox jumps over the lazy dog?;
                  ^
stringoperation8.java:7: error: ';' expected
    String str = ?The quick brown fox jumps over the lazy dog?;
                  ^
stringoperation8.java:7: error: ';' expected
    String str = ?The quick brown fox jumps over the lazy dog?;
                  ^
stringoperation8.java:7: error: ';' expected
    String str = ?The quick brown fox jumps over the lazy dog?;
                  ^
stringoperation8.java:7: error: illegal character: '\u201d'
    String str = ?The quick brown fox jumps over the lazy dog?;
                  ^
stringoperation8.java:7: error: not a statement
    String str = ?The quick brown fox jumps over the lazy dog?;
                  ^
7 errors

C:\Users\VARUN\OneDrive\Desktop\java>javac stringoperation8.java

C:\Users\VARUN\OneDrive\Desktop\java>java stringoperation8
Original String: The quick brown fox jumps over the lazy dog
String in lowercase: the quick brown fox jumps over the lazy dog

C:\Users\VARUN\OneDrive\Desktop\java>
```

ix. Code:

```
import java.io.*;

import java.util.*;

class stringoperation9

{

    public static void main(String arg[])

    {

        String str = "The quick brown fox jumps over the lazy dog";

        int len = str.length();

        System.out.println("The string length of '"+str+"' is: "+len);

    }

}
```

Output:

```
Command Prompt
Microsoft Windows [Version 10.0.22621.1265]
(c) Microsoft Corporation. All rights reserved.

C:\Users\VARUN>cd OneDrive
C:\Users\VARUN\OneDrive>cd Desktop
C:\Users\VARUN\OneDrive\Desktop>cd java
C:\Users\VARUN\OneDrive\Desktop\java>javac operation9.java
error: file not found: operation9.java
Usage: javac <options> <source files>
use --help for a list of possible options

C:\Users\VARUN\OneDrive\Desktop\java>javac stringoperation9.java
C:\Users\VARUN\OneDrive\Desktop\java>java stringoperation9
The string length of 'The quick brown fox jumps over the lazy dog' is: 43
C:\Users\VARUN\OneDrive\Desktop\java>|
```

x. Code:

```
import java.io.*;
import java.util.*;
class stringoperation10
{
    public static void main(String arg[])
    {
        String columnist1 = "The quick brown fox jumps over the lazy
dog";
        String columnist2 = "The quick brown fox jumps over the lazy dog";
        boolean equals1 = columnist1.equals(columnist2);
        System.out.println("\"" + columnist1 + "\" equals \"" +columnist2 + "\"="
+ equals1);
    }
}
```

Output:

```
Command Prompt
Microsoft Windows [Version 10.0.22621.1265]
(c) Microsoft Corporation. All rights reserved.

C:\Users\VARUN>cd OneDrive
C:\Users\VARUN\OneDrive>cd Desktop
C:\Users\VARUN\OneDrive\Desktop>cd java
C:\Users\VARUN\OneDrive\Desktop\java>javac stringoperation10.java
C:\Users\VARUN\OneDrive\Desktop\java>java stringoperation10
"The quick brown fox jumps over the lazy dog" equals "The quick brown fox jumps over the lazy dog"=true
C:\Users\VARUN\OneDrive\Desktop\java>
```

2.Code:

```
import java.io.*;
import java.util.*;
class Account
{
    static double balance=0;
    public static void main(String arg[])
    {
        Scanner s=new Scanner(System.in);
        while(true)
        {
            System.out.print("Press 1 to continue...");
            int y=s.nextInt();
            if(y==1)
            {
                choice();
            }
        }
    }
}
```

```

        else
        {
            break;
        }
    }
}

public static void Account()
{
    System.out.println(balance);
}

public static void deposit(double amount)
{
    balance += amount;
    System.out.println("Amount is deposited");
}

public static void withdraw(double amount)
{
    if (balance >= amount)
    {
        balance -= amount;
        System.out.println(amount+" is withdrawn");
    }

    else
    {
        System.out.println("Insufficient funds");
    }
}

public static void choice()
{

```

```

        System.out.println("1.Check Balance");
        System.out.println("2.Deposit");
        System.out.println("3.Withdraw");
        System.out.print("Enter your choice");
        Scanner s1=new Scanner(System.in);
        int i=s1.nextInt();
        if(i==1)
        {
            Account();
        }
        else if(i==2)
        {
            System.out.print("Enter amount to be deposit :");
            int amount=s1.nextInt();
            deposit(amount);
        }
        else if(i==3)
        {
            System.out.print("Enter amount to be withdraw :");
            int amount=s1.nextInt();
            withdraw(amount);
        }
        else
        {
            System.out.print("Invalid Choice ");
        }
    }
}

```

Output:

```
Command Prompt
Enter your choice1
1000.0
Press 1 to continue...3
C:\Users\VARUN\OneDrive\Desktop\java>java Account
Press 1 to continue...2
C:\Users\VARUN\OneDrive\Desktop\java>javac account.java
C:\Users\VARUN\OneDrive\Desktop\java>java Account
Press 1 to continue...1
1.Check Balance
2.Deposit
3.Withdraw
Enter your choice2
Enter amount to be deposit :1000
Amount is deposited
Press 1 to continue...1
1.Check Balance
2.Deposit
3.Withdraw
Enter your choice1
1000.0
Press 1 to continue...1
1.Check Balance
2.Deposit
3.Withdraw
Enter your choice3
Enter amount to be withdraw :500
500.0 is withdrawn
Press 1 to continue...1
1.Check Balance
2.Deposit
3.Withdraw
Enter your choice1
500.0
Press 1 to continue...2
C:\Users\VARUN\OneDrive\Desktop\java>
```

3.Code:

```
import java.io.*;
import java.util.*;
class NeedleHaystack
{
    public static void main(String[] args)
    {
        String needle;
        String haystack;

        Scanner c=new Scanner(System.in);

        System.out.print("Haystack :");

        haystack=c.nextLine();

        System.out.print("needle :");

        needle=c.nextLine();

        int index = haystack.indexOf(needle);

        if (index == -1)
        {
            System.out.println(needle+" not found in "+haystack);
        }
    }
}
```

```

    }

    else

    {

        System.out.println(needle+" found at index " + index);

    }

}
}
}

```

Output:

```

Microsoft Windows [Version 10.0.22621.1265]
(c) Microsoft Corporation. All rights reserved.

C:\Users\VARUN>cd OneDrive

C:\Users\VARUN\OneDrive>cd Desktop

C:\Users\VARUN\OneDrive\Desktop>cd java

C:\Users\VARUN\OneDrive\Desktop\java>javac needlehaystack
error: Class names, 'needlehaystack', are only accepted if annotation processing is explicitly requested
1 error

C:\Users\VARUN\OneDrive\Desktop\java>javac needlehaystack.java

C:\Users\VARUN\OneDrive\Desktop\java>java NeedleHaystack
Haystack :sadbut
needle :sad
sad found at index 0

C:\Users\VARUN\OneDrive\Desktop\java>java NeedleHaystack
Haystack :leetcode
needle :leetcode
leetcode not found in leetcode

C:\Users\VARUN\OneDrive\Desktop\java>|

```

4.Code:

```

import java.io.*;

import java.util.*;

class lastword

{

    public static void main(String arg[])

    {

        String s;

        Scanner c=new Scanner(System.in);

        System.out.print("Enter a String :");

```



```

        s=c.nextLine();
        System.out.print("Length of last word :"+lengthOfLastWord(s));

    }
    public static int lengthOfLastWord(String s)
    {
        int count = 0;
        s = s.trim();
        int start = s.length() - 1;
        for(int i=start; i >= 0; i--)
        {
            if(s.charAt(i) == ' ')
            {
                break;
            }
            count++;
        }
        return count;
    }
}

```

Output:

```
Command Prompt
Microsoft Windows [Version 10.0.22621.1265]
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C:\Users\VARUN>cd OneDrive
C:\Users\VARUN\OneDrive>cd Desktop
C:\Users\VARUN\OneDrive\Desktop>cd java
C:\Users\VARUN\OneDrive\Desktop\java>javac lastword.java
C:\Users\VARUN\OneDrive\Desktop\java>java lastword
Enter a String :saveetha
Length of last word :8
C:\Users\VARUN\OneDrive\Desktop\java>|
```

5.Code:

```
import java.io.*;
import java.util.*;
class factor
{
    public static void main(String args[])
    {
        try
        {
            Scanner sc=new Scanner(System.in);
            int count=0,n,i,j=0,m=4;
            int []a=new int [10];
            System.out.print("Enter the number:");
            n=sc.nextInt();
            if(n<=0)
            {
                System.out.println("Enter valid number");
            }
        }
    }
}
```

```

else
    {
        for(i=1;i<=n;i++)
        {
            if(n%i==0)
            {
                a[j] = i;
                System.out.println("..." + i);
                count++;
                j++;
            }
        }
        System.out.println("The number of factors:"+count);
    }
    System.out.println(m + "th item " + a[m-1]);
}
catch(Exception e)
{
    System.out.println("Enter only numbers");
}
}

```

Output:

```
Command Prompt
Microsoft Windows [Version 10.0.22621.1265]
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C:\Users\VARUN>cd OneDrive
C:\Users\VARUN\OneDrive>cd Desktop
C:\Users\VARUN\OneDrive\Desktop>cd java
C:\Users\VARUN\OneDrive\Desktop\java>javac factor.java
C:\Users\VARUN\OneDrive\Desktop\java>java factor
Enter the number:56
...1
...2
...4
...7
...8
...14
...28
...56
The number of factors:8
4th item 7
C:\Users\VARUN\OneDrive\Desktop\java>|
```