**Assignment 5 - OOPS With JAVA**

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import java.util.Arrays;

import java.util.\*;

//1.Write a program which takes a string and prints the number of vowels,

// consonants (non-vowels) numbers and other characters.

// Input: "Hello world 37 1!"

// Output: Vowels: 3

// Consonants: 7

// Numbers: 2

// Others: 6

class Assignment5

{

public static void main(String args[])

{

Scanner sc=new Scanner(System.in);

int vctr=0,cctr=0,nctr=0,sctr=0;

String strN=sc.nextLine();

String str=strN.toLowerCase();

System.out.println(str);

char ch;

for(int i=0;i<str.length();i++)

{

ch=str.charAt(i);

if(ch=='a'||ch=='e'||ch=='i'||ch=='o'||ch=='u')

{

vctr++;

}

else if(ch=='1'||ch=='2'||ch=='3'||ch=='4'||ch=='5'||ch=='6'||ch=='7'||ch=='8'||ch=='9'||ch=='0')

{

nctr++;

}

else if(ch=='@'||ch=='!'||ch=='#'||ch=='$')

{

sctr++;

}

else

{

if(ch!=' ')

cctr++;

}

}

System.out.println("VOWELS : "+vctr);

System.out.println("CONSONANTS : "+cctr);

System.out.println("NUMBER : "+nctr);

System.out.println("OTHERS : "+sctr);

}

}

//-------------------------------------------------------------------------------------------------------------------

//2. Given a string which contains numbers from 0 to 9 expressed as words, output a string which

// contains all numbers incremented by 1

// Input : There are three bugs and nine features

// Output : There are four bugs and ten features

class Assignment5

{

public static void main(String[] args) {

// TODO Auto-generated method stub

//String s1 = "There are three bugs and nine features";

//StringBuffer sb=new StringBuffer(s1);

//String s1 = "one two three four five six seven eight nine nine features";

/\*

\* String[] arr=s1.split(" ");

\*

\* System.out.println(Arrays.toString(arr));

\*

\* for(int i=0;i<arr.length;i++) { if(arr[i].equals("one")) { arr[i]="two"; } }

\*/

Scanner sc=new Scanner(System.in);

System.out.println("Enter the string : ");

String s1=sc.nextLine();

s1=s1.toLowerCase();

String s2=""; String s3="";

String s4=""; String s5="";

String s6=""; String s7="";

String s8=""; String s9="";

String s10=""; String s11="";

if(s1.contains("nine"))

{

s2=s1.replace("nine", "ten");

}else s2=s1;

if(s2.contains("eight"))

{

s3=s2.replace( "eight","nine");

} else s3=s2;

if(s3.contains("seven"))

{

s4=s3.replace( "seven","eight");

}else s4=s3;

if(s4.contains("six"))

{

s5=s4.replace( "six","seven");

}else s5=s4;

if(s5.contains("five"))

{

s6=s5.replace( "five","six");

}else s6=s5;

if(s6.contains("four"))

{

s7=s6.replace( "four","five");

}else s7=s6;

if(s7.contains("three"))

{

s8=s7.replace( "three","four");

}else s8=s7;

if(s8.contains("two"))

{

s9=s8.replace( "two","three");

}else s9=s8;

if(s9.contains("one"))

{

s10=s9.replace( "one","two");

}else s10=s9;

if(s10.contains("zero"))

{

s11=s10.replace( "zero","one");

}else s11=s10;

System.out.println(s11);

}

}

//-------------------------------------------------------------------------------------------------------------------

//3. Write a function to replace multiple consecutive occurrences of characters with a single character

// Input : abccddde

// Output : abcde

// Input : aabbbbaaa

// Output : aba

class Assignment5

{

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

String s=sc.nextLine();

char arr[]=s.toCharArray();

int x=arr.length, count;

for(int i=0;i<x-1;i++)

{

count=0;

for(int j=0;j<x;j++)

{

if(arr[i]==arr[j])

{

count++;

if(count>1)

{

arr[j]=' ';

break;

}

}

}

}

for(int i=0;i<x;i++)

{

if(arr[i]!=' ')

System.out.print(arr[i]);

}

System.out.println();

}

}

//-------------------------------------------------------------------------------------------------------------------

//4. Given a string, print the first non-repeating character in the string.

// Input: "aabbccdeeff", Output: d

// Input: "aabbccddeeffgg", Output: "Not found"

class Assignment5

{

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

String s=sc.nextLine();

char arr[]=s.toCharArray();

int x=arr.length,count=0;

char y=' ';

for(int i=1;i<x-1;i++)

{

if(arr[i]!=arr[i-1] && arr[i]!=arr[i+1])

{

y=arr[i];

count++;

break;

}

}

if(count==1)

System.out.println(y);

else

System.out.println("Not found");

}

}

//-------------------------------------------------------------------------------------------------------------------

//5. Write a program which prints the length of each word in a sentence.

// Input: I am a Java programmer

// Output: 1 2 1 4 10

class Assignment5

{

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

String s=sc.nextLine();

char arr[]=s.toCharArray();

int x=arr.length,y=0;

for(int i=0;i<x;i++)

{

if(arr[i]==' ')

{

System.out.print((i-y)+" ");

y=i+1;

}

}

System.out.println();

}

}

//-------------------------------------------------------------------------------------------------------------------

//6. Given a string, check whether it is a formed by concatenating the same string 3 times.

// Input: "abcabcabc", Output: true (abc is repeated 3 times)

// Input: "abcdabcdabcd", Output: true (abcd is repeated 3 times)

// Input: "andandan', Output: false

class Assignment5

{

public static void main(String args[])

{

Scanner sc=new Scanner(System.in);

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

String s=sc.nextLine();

char arr[]=s.toCharArray();

int count=0;

int y=s.indexOf(arr[0],1);

if(3\*y==arr.length)

{

for(int i=0;i<2\*y;i++)

{

if(arr[i]==arr[i+y])

count++;

}

}

if(count==(2\*y))

System.out.println("true");

else

System.out.println("false");

}

}

//-------------------------------------------------------------------------------------------------------------------

//7. Given a string , output another string where the case of the characters is reversed.

// Input : "Hello World"

// Output : "hELLO wORLD"

class Assignment5

{

public static void main(String args[])

{

Scanner sc=new Scanner(System.in);

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

String s=sc.nextLine();

char arr[]=s.toCharArray();

int x[]=new int[s.length()];

for(int i=0;i<s.length();i++)

{

x[i]=(int)s.charAt(i);

if(x[i]>=65 && x[i]<=90)

System.out.print((char)(32+arr[i]));

else if(x[i]>=97 && x[i]<=122)

System.out.print((char)(arr[i]-32));

else

System.out.print(arr[i]);

}

System.out.println();

}

}

//-------------------------------------------------------------------------------------------------------------------

//8. Write a program to reverse a string.

// Input : "hello"

// Output : "olleh"

// Input : "Hello World"

// Output : "dlrow olleh"

class Assignment5

{

public static void main(String args[])

{

Scanner sc=new Scanner(System.in);

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

String s=sc.nextLine();

String sl=s.toLowerCase();

char arr[]=sl.toCharArray();

char arr1[]=new char[s.length()];

int ub=s.length();

for(int i=0,j=(ub-1) ; i<ub/2 ; i++,j--)

{

arr1[j]=arr[i];

arr1[i]=arr[j];

}

if(ub%2!=0)

arr1[ub/2]=arr[ub/2];

// String s1="";

// for(int i=(arr.length-1); i>=0 ; i--)

// {

// s1=s1+arr[i];

// }

// System.out.println(s1);

// for(int i=ub-1; i>=0 ; i--)

// {

// System.out.print(arr[i]);

// }

// System.out.println();

//==================================

// for(int i=0; i<ub ; i++)

// {

// System.out.print(arr1[i]);

// }

// System.out.println();

sl=String.valueOf(arr1);

System.out.println(sl);

}

}

//-------------------------------------------------------------------------------------------------------------------

//9. Write a program which accepts two string and prints all unique characters which are common in both stirngs.

// Input 1 : "hello world"

// Input 2 : "lot of work"

// Output : 'l' , 'o' , 'w' , 'r'

class Assignment5

{

public static void main(String args[])

{

Scanner sc=new Scanner(System.in);

System.out.print("Enter String 1: ");

String s1=sc.nextLine();

System.out.print("Enter String 2: ");

String s2=sc.nextLine();

char arr1[]=s1.toCharArray();

char arr2[]=s2.toCharArray();

int i, j;

char x;

for(i=0 ; i<s1.length(); i++)

{

x=' ';

for(j=0 ; j<s2.length() ; j++)

{

if(arr1[i]==arr2[j] && arr1[i]!=' ' && arr2[j]!=x)

{

System.out.print(arr1[i]+", ");

x=arr2[j];

arr2[j]=' ';

}

}

}

System.out.println();

}

}