JAVA ASSIGNMENT-21-03-2018

1.Write a program to find the number of occurance of each character in a word(Frequency of each character)

```
import java.util.*;
import java.io.*;

public class Freq{

   public static void main(String[] args) {
      //String str = "This website is awesome.";
      //char ch = 'e';
      int frequency = 0;
      Scanner in=new Scanner(System.in);

      System.out.println("Enter Your String");
      String str=in.nextLine();
      char ch='e';
      for(int i = 0; i < str.length(); i++) {
         if(ch == str.charAt(i)) {
            ++frequency;
         }
      }

      System.out.println("Frequency of " + ch + " = " + frequency);
   }
}
```

Output

```
Enter Your String
Jazeel
Frequency of e = 2
```

2.Print the number of palindrome words in a sentence

```
import java.util.*;
class Palindrome{
   public static void main(String args[]){
      Scanner sc= new Scanner(System.in);
      System.out.println("Input The sentence:\t");
      String str=sc.nextLine();
      int count=0;
      str=str.replace("."," ");
      str=str.replace("?"," ");
      str=str.replace("!"," ");
      String answer="", ar[]= str.split(" ");
      for(int i=0;i < ar.length;i++){
         if(isPalindrome(ar[i])){
            count++;
            answer += ar[i] + " ";
         }
      }
```

```
        System.out.println("OUTPUT:\t\t"+answer+"\nNUMBER OF PALINDROMIC WORDS:
"+count);
    }
    public static boolean isPalindrome(String str){
        char ch;
        int len=str.length(),half=len/2;
        for(int i=0;i < half;i++){
            if(str.charAt(i)!=str.charAt(len-i-1)) return false;
        }
        return true;
    }
}
```

Output

```
Hassan is know about malayalam and radar
OUTPUT:                 malayalam radar
NUMBER OF PALINDROMIC WORDS: 2
```

3.Read a sentence and print the first and last word in reverse order.

```
import java.util.Scanner;
public class Order
{
public static void main(String[] args) {
System.out.println("Enter the string");
Scanner in = new Scanner(System.in);
String sentence = in.nextLine();
String sentencearr[] = sentence.split(" ");
String first = sentencearr[0];
String last = sentencearr[(sentencearr.length)-1];
String firstrev = "";
for(int i = 0;i<first.length();i++){
firstrev = firstrev + first.charAt(i);
}
System.out.println("first word:"+firstrev);
String lastrev = "";
for(int i = 0;i<last.length();i++)
{
lastrev = lastrev + last.charAt(i);
}
System.out.println("last word:"+lastrev);
}
}
```

Output

```
Enter the string
i am hassan
first word:i
last word:hassan
```

4.Read a sentence and convert all capital letters to small letter and small letters to capital letter

```
import java.util.*;

public class Case
{
  public static void main(String[] args)
```

```
{
  Scanner in=new Scanner(System.in);
  System.out.println("Enter the Sentence ");
  String str=in.nextLine();

  String lower=str.toLowerCase();
  String upper=str.toUpperCase();

System.out.println(lower);
System.out.println(upper);
}
}
```

Output

```
Enter the Sentence
hassan Is gooD
hassan is good
HASSAN IS GOOD
```

5.Replace all the capital letters in a sentence by * symbol

```
import java.util.*;

public class Star
{
  public static void main(String[] args)
{
    String isUp = "";
  Scanner in=new Scanner(System.in);
  System.out.println("Enter the Sentence ");
  String str=in.nextLine();


        String replaceString=str.replaceAll("([A-Z])","*");


System.out.println(replaceString);
}
}
```

Output

```
Enter the Sentence
aA
a*
```

6.Print the number of digits in a sentence

```
import java.util.*;

public class Digit
{
  public static void main(String[] args)
{


  Scanner in=new Scanner(System.in);
  System.out.println("Enter the Sentence ");
  String str=in.nextLine();
```

```
  char[] ch = str.toCharArray();

  int num=0;
  for(int i = 0; i < str.length(); i++)
{
          if(Character.isDigit(ch[i])){
                                  num ++ ;
}
}

System.out.println("Number Of Digits in A Sentence " +num);

}
}
```

Output

```
Enter the Sentence
gsdhsgf1ns
Number Of Digits in A Sentence 1
```

7.Input a phone number in a string form and extract the exchange-code.

```
import java.util.Scanner;
public class Phone {
public static void main(String[] args) {
// TODO Auto-generated method stub
System.out.println("Enter the string");
Scanner in = new Scanner(System.in);
String sentence = in.nextLine();
String[] array = sentence.split("-");
System.out.println(array[0]);
}
}
```

Output

```
Enter the string
+919544616846
+919544616846
```

8.Reverse each word in a sentence

```
import java.util.*;

public class Reverse
{
  public static void main(String[] args)
{
  Scanner in=new Scanner(System.in);
  System.out.println("Enter the Sentence ");
  String str=in.nextLine();

  String[] words = str.split(" ");
  System.out.println("Reversed Sentence");
       for (int i = words.length - 1; i >= 0; i--)
{
          System.out.print(words[i] + " ");
}
}
```

```
}
```
Output

```
Enter the Sentence
Hassan gaas
Reversed Sentence
gaas Hassan
```

9.Print the number of occurance of a particular word in a sentence.

```
import java.util.*;

public class Word
{
  public static void main(String[] args)
{
  Scanner in=new Scanner(System.in);
  System.out.println("Enter the Sentence ");
  String str=in.nextLine();
  System.out.println("Enter the Word to find frequency");
  String word=in.next();

String a[] = str.split(" ");
int count = 0;
    for (int i = 0; i < a.length; i++)
    {
    // if match found increase count
    if (word.equals(a[i]))
        count++;
    }

System.out.println("Number Of The Word\t"+word+"\tOcuurece is\t"+count);
}
```

10.Read a word (more than 6 characters)and create a new word by joining the first three characters and last 2 characters.

```
import java.util.Scanner;
public class Attach
{
public static void main(String[] args)
{System.out.println("Enter the string");
Scanner in = new Scanner(System.in);
String sentence = in.nextLine();
String joinword = "";
//String word = "";
int len = sentence.length();
int i;
for(i = 0;i<3;i++)
joinword = joinword + sentence.charAt(i);
for(i = (len-2);i<len;i++)
joinword = joinword + sentence.charAt(i);
System.out.println(joinword);
}
}
```

11.Read a sentence and remove all vowels from it.

```
import java.util.Scanner;
```

```
public class JavaProgram
{
public static void main(String args[])
{
String strOrig, strNew;
Scanner scan = new Scanner(System.in);
System.out.print("Enter a String : ");
strOrig = scan.nextLine();System.out.print("Removing Vowels from The String [" +strOrig+ "]\n");
strNew = strOrig.replaceAll("[aeiouAEIOU]", "");
System.out.print("All Vowels Removed Successfully..!!\nNow the String is :\n");
System.out.print(strNew);
}
}
```

12.Reverse the longest word in a sentence

```
import java.io.*;
class longwrd
{
public static void main(String args[])throws IOException
{
String s,str;
char b;
int c=0,i,l,p=0,max=0;;
InputStreamReader x=new InputStreamReader(System.in);
BufferedReader y=new BufferedReader(x);
System.out.println("ENTER A STRING");
s=y.readLine();
s=s.concat(" ");
l=s.length();
for(i=0;i<l;i++){
b=s.charAt(i);
if(b!=' ')
{
c=c+1;
}
else
{
if(c>max)
{
max=c;
p=i;
}
c=0;
}
}
str=s.substring(p-max,p);
String input = str+" "+max;
char[] try1 = input.toCharArray();
for (int i = try1.length-1; i>=0; i--)
System.out.print(try1[i]);
}
}
```

12.Reverse the longest word in a sentence

```
import java.io.*;
class longwrd
{
public static void main(String args[])throws IOException
{
String s,str;
char b;
int c=0,i,l,p=0,max=0;;
InputStreamReader x=new InputStreamReader(System.in);
BufferedReader y=new BufferedReader(x);
System.out.println("ENTER A STRING");
s=y.readLine();
s=s.concat(" ");
l=s.length();
for(i=0;i<l;i++){
b=s.charAt(i);
if(b!=' ')
{
c=c+1;
}
else
{
if(c>max)
{
max=c;
p=i;
}
c=0;
}
}
str=s.substring(p-max,p);
String input = str+" "+max;
char[] try1 = input.toCharArray();
for (int i = try1.length-1; i>=0; i--)
System.out.print(try1[i]);
}
}
```

13.Read a sentence and replace the second word by another word.

```
import java.util.*;
public class ReplaceWord
{
public static void main(String args[])
{
Scanner ob=new Scanner(System.in);
System.out.println("Enter the sentence.");
String s=ob.nextLine();
System.out.println("Enter the word to be replaced.");
String replace=ob.next();
System.out.println("Enter the word with which it is to be replaced.");
String replacewith=ob.next();
s=s+" ";
String newsen="";String temp="";
```

```
for(int i=0;i<s.length();i++)
{
char x=s.charAt(i);
if(x!=' ')
{
temp=temp+x;
}
else
{
if(replace.equals(temp))
{
newsen=newsen+replacewith;
}
else
{
newsen=newsen+temp;
}
newsen=newsen+" ";
temp="";
}}
System.out.println("The new sentence is :"+"\n"+newsen);
}
}
```

14.Print the number of commas and hyphens in a sentence.

```
import java.util.Scanner;
public class commaHyphen
{
public static void main(String[] args) {
System.out.println("Enter the string");
Scanner in = new Scanner(System.in);
String sentence = in.nextLine();
String hyphen = "-";
String comma = ",";
int Hcount = 0,Ccount = 0;
for(int i = 0;i<sentence.length();i++)
{
if((sentence.charAt(i))==hyphen.charAt(0))
{
Hcount ++;
}
else if((sentence.charAt(i))==comma.charAt(0))
{
Ccount++;
}}
System.out.println("No.of commas = "+Ccount);
System.out.println("No.of Hyphens = "+Hcount);
}
}
```

---

15. Print all 3 letter words in a sentence.

```
import java.util.Scanner;
public class Test {
public static void main(String[] args)
```

```
{
Scanner input = new Scanner(System.in);
System.out.println("Input a string:");
String s;
s = input.nextLine();
String[] strings = s.split(" ");
int[] counts = new int[4];
for(String str : strings)
if(str.length() < counts.length) counts[str.length()] += 1;
for(int i = 1; i < counts.length; i++)
System.out.println(i + " letter words: " + counts[i]);
input.close();
}
}
```

16.Read a sentence and print it by putting Z before each character.import java.util.Scanner;

```
class word {
public static void main(String[] args) {
Scanner input = new Scanner(System.in);
System.out.println("enter here your string");
String a;
a = input.nextLine();
for (int i = 0;i < a.length(); i++ ) {
System.out.println(“Z” +a.charAt(i));
}
}
}
```

17.Change all the last character of each word by $.

```
import java.util.Scanner;
public class lastDollar
{
public static String replacefunc(String orig, char replacer)
{
return orig.substring(0, orig.length()-1)+replacer;
}
public static void main(String[] args) {
System.out.println("Enter the string");
Scanner in = new Scanner(System.in);
String sentence = in.nextLine();
String[] array = sentence.split(" ");int last = (array.length)-1;
for(int i=0;i<array.length;i++)
{
array[i] = replacefunc(array[i], '$'); }
for(int i=0;i<array.length;i++)
{
System.out.println(array[i]);
}
}
}
```

---

18. Read a sentence and print the last word in alphabetical order.

```
package qsp;
public class selec {
public static void main(String[] args) {
```

```
String t="sumi bharali munna";
char ch[]=t.toCharArray();
for(int i=0;i<ch.length/2;i++)
{
char t1=ch[i];
ch[i]=ch[ch.length-1-i];
ch[ch.length-1-i]=t1;
}
String t2=new String(ch);
System.out.println(t2);
char ch1[]=t2.toCharArray();int i=0;
int c=0;
while(i<ch1.length &&ch[i]!=' ')
{
c++;
i++;
}
String nst="";
int k=c-1;
while(k>=0)
{
nst=nst+ch[k];
k--;
}
System.out.println(nst);
int l = nst.length();
alphabetical();
}
public static void alphabetical()
{
char b[] = new char[l];
for(int i=0;i<l;i++)
b[i] = n.charAt(i);
char t;
for(int j=0;j<l-1;j++)
{for(int k=0;k<l-1-j;k++)
{
if(b[k]>b[k+1])
{
t=b[k];
b[k]=b[k+1];
b[k+1]=t;
}
}
}
System.out.println("\nOriginal word : " +n);
System.out.print("Sorted word : ");
for(int m=0;m<l;m++)
System.out.print(b[m]);
System.out.print("\n");
}
}
```

```
}
}
```

19.Read a word and interchange the first and last character.

```
class SwapFirstLastCharacters {
static String count(String str)
{
char[] ch = str.toCharArray();for (int i = 0; i < ch.length; i++) {
int k = i;
while (i < ch.length && ch[i] != ' ')
i++;
char temp = ch[k];
ch[k] = ch[i - 1];
ch[i - 1] = temp;
}
return new String(ch);
}
public static void main(String[] args)
{
String str = "geeks for geeks";
System.out.println(count(str));
}
}
```

20. Encode a word by shifting 4 characters to the right.

```
import java.util.Scanner;
public class shiftString
{
static void cyclicLeftShift(String s, int k){
String result="";
for(int i=0;i<k;i++){
result = s.charAt(0)+s.substring(1, s.length() - 1);
s=result;}
System.out.println(s);
}
public static void main(String[] args)
{
String word = "sreev";
int times = 4;
cyclicLeftShift(word, times);
System.out.println("hiiiiiiii");
//System.out.println("Encoded word: "+word);
}
}
```

21. Input a sentence :Replace all 'the' by 'an' in the sentence.

```
import java.util.*;
public class ReplaceWord
{
public static void main(String args[])
{
Scanner ob=new Scanner(System.in);
System.out.println("Enter the sentence.");
String s=ob.nextLine();
System.out.println("Enter the word to be replaced.");
```

```
String replace=ob.next();
System.out.println("Enter the word with which it is to be replaced.");
String replacewith=ob.next();
s=s+" ";String newsen="";String temp="";
for(int i=0;i<s.length();i++)
{
char x=s.charAt(i);
if(x!=' ')
{
temp=temp+x;
}
else
{
if(replace.equals(temp))
{
newsen=newsen+replacewith;
}
else
{
newsen=newsen+temp;
}
newsen=newsen+" ";
temp="";
}
}
System.out.println("The new sentence is :"+"\n"+newsen);
}
}
```

---

22. Input a character in the alphabet series.Find its position. Print the character corresponding to the position from the other end.

```
public class ReplaceWord
{
public static void main(String args[])
{
String str = "abcdef";
char[] ch = str.toCharArray();
for(char c : ch){
int temp = (int)c;
int temp_integer = 96;
if(temp<=122 & temp>=97)
{
int count=26;
int value=count- temp-temp_integer;
System.out.print(“value =” +value);
}
}
```

---

23 . Input a word. Calculate the worth of the word

```
public class ReplaceWord
{
public static void main(String args[])
{
String str = "abcdef";
```

```
char[] ch = str.toCharArray();
for(char c : ch)
{
int temp = (int)c;
int temp_integer = 96;
if(temp<=122 & temp>=97)
{
int count=0;
count=count+ temp-temp_integer;}
System.out.print(“value =” +count);
}
}
}
}
```

3.Input a word.Calculate the worth of the word (eg:MERRY=13+5+18+18+25=79)

```
import java.util.Scanner;
public class indexString
{
public static void main(String[] args) {
System.out.println("Enter the word");
Scanner in = new Scanner(System.in);
String word = in.nextLine();
int size = word.length();
String alpha = "ABCDEFGHIJKLMNOPQRSTUVWXYZ";
int sum = 0;
int[] ch = new int[size];
for(int i = 0;i<word.length();i++)
{
for(int j = 0;j<alpha.length();j++)
{
if(word.charAt(i)==alpha.charAt(j))
{
sum = sum + (alpha.indexOf(alpha.charAt(j))+1);}
}
}
System.out.println(sum);
}
}
```

24.Input a word.Arrange the word in ascending order.

```
import java.lang.reflect.Array;
import java.util.Arrays;
import java.util.Scanner;
public class ascendingString {
public static void main(String[] args) {
System.out.println("Enter the word");
Scanner in = new Scanner(System.in);
String word = in.nextLine();
int size = word.length();
char[] ch = word.toCharArray();
Arrays.sort(ch);
String result = new String(ch);
System.out.println("Word in ascending order: "+result);
```

```
}
}
```

26.Input a sentence and print each word in seperate lines.

```
package lab2_3;
public class Main
{
public static void main(String[] args) {
String s2 = "This is a text and we should print each word";
int i;
int j;
for (i = 0; i <= s2.length() - 1; i++){
if (s2.substring(i).startsWith(" ") || i == 0){
for (j = i + 1; j <= s2.length() - 1; j++){
if (s2.substring(j).startsWith(" ") || j == s2.length() - 1) {
System.out.println(s2.substring(i, j));
i = j;
}
}
}
}
}
}
```