**STRINGS IN JAVA**

QUES-1) WHAT IS STRING IN JAVA?

ANS) THE COLLECTION OF CHARACTER ENCLOSED WITHIN “ ”.

QUES-2) TYPES OF STRING IN JAVA ARE?

ANS) THERE ARE TWO TYPES OF STRING IN JAVA :-

1. MUTABLE STRING
2. IMMUTABLE STRING

QUES-3) IN HOW MANY WAYS YOU CAN CREATE STRING OBJECT IN JAVA?

ANS) THERE ARE 2 WAYS TO CREATE STRING OBJECT IN JAVA :-

1. BY ASSIGNING THEM DIRECLTY-

String s1 = “Prashant”;

1. BY USING NEW KEYWORD-

String s2 = new String(“Prashant”);

QUES-4) WHAT IS A STRING CONSTANT POOL?

ANS) THE SCP IS SPECIAL TYPE OF MEMORY SPACE IN HEAP, IN THIS THE OBJECT WILL CREATE DIRECTLY, AND NO DUPLICATES IS ALLOWED.

QUES-5) WHAT DO YOU MEAN BY MUTABLE AND IMMUTABLE STRING?

ANS) MUTABLE STRING- THE STRING TYPE WHICH WE CAN CHANGE THE ELEMENTS.

IMMUTABLE STRING- THE STRING TYPE WHICH WE CAN’T CHANGE.

QUES-6) WHAT EXACTLY IS THE STRING CONSTANT POOL LOCATED IN THE MEMORY?

ANS) IN HEAP.

QUES-7) HOW TO FIND THE LENGTH OF A STRING IN JAVA, EXPLAIN WITH AN EXAMPLE?

ANS) IN STRINGS WE HAVE A LENGTH() METHOD, WHICH IS AN INBUILT METHOD, DEVELOPERS USE THIS THESE INBUILT FUNCTIONS VERY OFTEN, THESE INBUILT FUNCTIONS ARE CODED IN JAVA LIBRARY, WE DIRECTLY USE IT BY THEIR NAME.

public class Strings {

    public static void main(String[] args) {

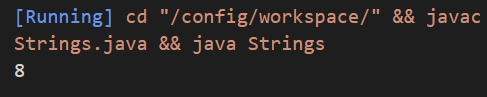
        String n = "Prashant";

        System.out.println(n.length());

    }

}

OUTPUT-



QUES-8) WRITE A PROGRAM TO FIND THE LENGTH OF A STRING “refrigerator”?

ANS)

public class Strings {

    public static void main(String[] args) {

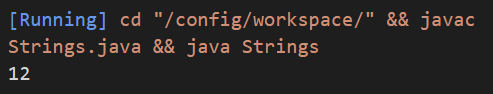
        String n = "refrigerator";

        System.out.println(n.length());

    }

}

OUTPUT-



QUES-9) WRITE A SIMPLE STRING PROGRAM TO TAKE INPUT FROM USER.

ANS)

import java.io.\*;

import java.util.\*;

public class Strings {

    public static void main(String[] args) {

        Scanner scn= new Scanner(System.in);

        System.out.println("enter the string");

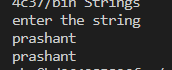
        String n = scn.nextLine();

        System.out.println(n);

    }

}

OUTPUT-



QUES-10) HOW DO YOU COMPARE TWO STRINGS IN JAVA? GIVE AN EXAMPLE?

ANS) BASICALLY THERE ARE TWO WAYS TO COMPARE STRINGS IN JAVA

1. BY USING == OPERATOR
2. BY USING EQUALS() METHOD

* == OPERATOR

THIS IS USED COMPARE THE REFERENCES OF TWO OBJECTS, WHETHER THE TWO OBJECTS ARE REFERENCING TO THE SAME OBJECT IN THE MEMORY OR NOT.

import java.io.\*;

import java.util.\*;

public class Strings {

    public static void main(String[] args) {

        String s1 = "Prashant"; // in this the object will create in scp

        String s2 = "Prashant";

        String s3 = new String("PRASHANT"); // in this the object will create outside scp inside heap area\\

        System.out.println(s1==s2); //true

        System.out.println(s1==s3); //false

    }

}

* BY USING EQUALS() METHOD-

THIS METHOD WILL COMPARE THE ACTUAL CONTECT OF THE OBJECTS

import java.io.\*;

import java.util.\*;

public class Strings {

    public static void main(String[] args) {

        String s1 = "Prashant"; // in this the object will create in scp

        String s2 = "Prashant";

        String s3 = new String("PRASHANT"); // in this the object will create outside scp inside heap area\\

        System.out.println(s1.equals(s2)); //true

        System.out.println(s1.equals(s3)); //false

    }

}

QUES-12) HOW TO YOU CONCATENATE TWO STRINGS IN JAVA? GIVE AN EXAMPLE?

ANS) CONCATENATION- THE WAY BY WHICH WE CAN ADD TWO OR MORE STRINGS TOGETHER TO MAKE A NEW STRING.

BASICALLY THERE ARE TWO WAYS TO CONCATENATE STRINGS IN JAVA

1. BY USING CONCAT METHOD- IN THIS WE ARE GOING TO USE THE CONCAT METHOD, VIA USING THIS WE CAN CONCAT TWO STRINGS.
2. BY USING + OPERATOR- VIA USING THIS WE CAN CONCAT TWO OR MORE STRIINGS TOGETHER TO FORM A NEW STRING.

FOR EG-

class demo{

    // in this we are going to discuss about string.

    public static void main(String[] args) {

        String str = "Prashant Saini";

        String str2 = "is a engineer";

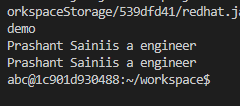
        System.out.println(str.concat(str2));

        System.out.println(str+str2);

    }

}

OUTPUT-



QUES-13) WRITE A PROGRAM TO CHECK IF THE LETTER “e” IS PRESENT IN THE WORD “Umbrella”?

ANS)

class demo{

    // in this we are going to discuss about string.

    public static void main(String[] args) {

        String str = "Umbrella";

        if(str.contains("e")){

            System.out.println("yes it contain alphabet e");

        }else{

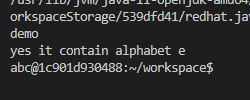
            System.out.println("no it doesn't contain alphabet e");

        }

    }

}

OUTPUT-



QUES-14) WRITE A PROGRAM TO DELETE ALL CONSONANTS FROM THE STRING “HELLO, HAVE A GOOD DAY”.

ANS)

class demo{

    // in this we are going to discuss about string.

    public static void main(String[] args) {

        String str = "Hello, Have a good day";

        String str1 = "";

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

            char ch = str.charAt(i);

            if(!(ch == 'a' || ch == 'A' || ch == 'e' || ch =='E' ||ch == 'i' || ch == 'I' ||ch == 'o' || ch == 'O' || ch == 'u' || ch == 'U')){

                str1 = (str1 + ch);

            }

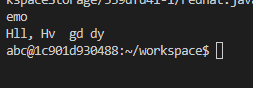
        }

        System.out.println("Output" + str1);

    }

}

OUTPUT-



QUES-15) WAP TO CHECK IF “2552” IS PALINDROME OR NOT?

ANS)

public class Launch {

    public static void main(String[] args) {

        String str1 = "2552";

        String str2 = "";

        for(int i=str1.length()-1; i>=0; i--){

            str2 = str2+str1.charAt(i);

        }

        System.out.println(str2);

    if(str1.equals(str2)){

        System.out.println("Given string is palindrome");

    }else{

        System.out.println("Given string is not palindrome");

    }

}

}

OUTPUT-



QUES-16) WAP TO PRINT DUPLICATE FROM A STRING.

ANS)

public class Launch{

    // remove duplicates from str

    public static void main(String[] args) {

        String str1 = "Prashant";

        String str2 = "";

        // in this example their are duplicate of a, we have to remove the duplicates

        for(int i=0; i<str1.length(); i++){

            char ch = str1.charAt(i);

            if(!(ch=='a' || ch=='A')){

                str2 = str2+ch;

            }

        }

        System.out.println(str1); //original string

        System.out.println(str2); //final string after removing duplicates

    }

}

OUTPUT-



QUES-17) WAP TO PRINT DUPLICATE CHARACTER FROM A STRING.

ANS)

public class Launch{

    // remove duplicates from str

    public static void main(String[] args) {

        String str1 = "Prashant";

        String str2 = "";

        // in this example their are duplicate of a, we have to remove the duplicates

        for(int i=0; i<str1.length(); i++){

            char ch = str1.charAt(i);

            if(ch=='a' || ch=='A'){

                str2 = str2+ch;

            }

        }

        System.out.println(str1); //original string

        System.out.println(str2); //duplicates in original string

    }

}

OUTPUT-



QUES-18) WAP TO PRINT THE NUMBER OF CONSONANTS, VOWELS, SPECIAL CHARACTER IN A STRING.

ANS)

public class Launch{

    // print the duplicates, consonants, and vowels

    // in this case consonants and special character are same

    public static void main(String[] args) {

        String str1 = "Prashant";

        String str2 = "";

        String str3 = "";

        // in this example their are duplicate of a, we have to remove the duplicates

        for(int i=0; i<str1.length(); i++){

            char ch = str1.charAt(i);

            char ch1 = str1.charAt(i);

            if(ch=='a' || ch=='A'){

                str2 = str2+ch;

            }

            if(ch1=='p' || ch1=='P' || ch1=='r' || ch1=='R' || ch1=='s' || ch1=='S' || ch1=='h' || ch1=='H' || ch1=='n' || ch1=='N' || ch1=='t' || ch1=='T'){

                str3 = str3+ch1;

            }

        }

        System.out.println(str1); //original string

        System.out.println(str2); //print the vowels

        System.out.println(str3); //print the consonants

    }

}

OUTPUT –



QUES-19) WAP TO PRINT IF STRING CONTAINS ALL THE UNIQUE CHARACTERS.

ANS) UNIQUE CHARACTER- THE CHARACTER WHICH OCCUR AT ONCE IN A STRING.

public class Launch{

    // print the duplicates, consonants, and vowels

    // in this case consonants and special character are same

    public static void main(String[] args) {

        String str1 = "Prashant";

        String str3 = "";

        // in this example their are duplicate of a, we have to remove the duplicates

        for(int i=0; i<str1.length(); i++){

            char ch1 = str1.charAt(i);

            if(ch1=='p' || ch1=='P' || ch1=='r' || ch1=='R' || ch1=='s' || ch1=='S' || ch1=='h' || ch1=='H' || ch1=='n' || ch1=='N' || ch1=='t' || ch1=='T'){

                str3 = str3+ch1;

            }

        }

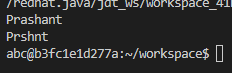
        System.out.println(str1); //original string

        System.out.println(str3); //print the unique characters

    }

}

OUTPUT-



QUES-20) WAP TO FIND THE MAXIMUM OCCURING CHARACTER IN A STRING.

ANS) IN THIS WE HAVE TO FIND THE DUPLICATES IN A STRING.

public class Launch{

    // print the duplicates

    public static void main(String[] args) {

        String str1 = "Prashant";

        String str2 = "";

        // in this example their are duplicate of a, we have to remove the duplicates

        for(int i=0; i<str1.length(); i++){

            char ch = str1.charAt(i);

            if(ch=='a' || ch=='A'){

                str2 = str2+ch;

            }

        }

        System.out.println(str1); //original string

        System.out.println(str2); //print the vowels

    }

}

OUTPUT-



QUES-21) WAP TO IMPLEMENT ANAGRAM WITH ATLEAST INBUILT METHODS USED.

ANS)

import java.util.Arrays;

public class Anagram {

    public static void main(String[] args) {

        String str1 = "School Master";

        String str2 = "The Classroom";

        // in this step we remove the white spaces

        str1 = str1.replace(" ", "");

        str2 = str2.replace(" ", "");

        //in this step we either convert to lower case or upper case

        str1 = str1.toLowerCase();

        str2 = str2.toLowerCase();

        //in this step we convert the string to char array

        char[] ar1=str1.toCharArray();

        char[] ar2 = str2.toCharArray();

        //in this we sort the array

        Arrays.sort(ar1);

        Arrays.sort(ar2);

        if(Arrays.equals(ar1, ar2)){

            System.out.println("This is an anagram");

        }else{

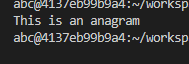
            System.out.println("This is not an anagram");

        }

    }

}

OUTPUT-



QUES-22) WAP TO IMPLEMENT PANGRAM PROGRAM WITH ALTEAST INBUILT METHODS.

ANS)

public class Pangram {

    public static void main(String[] args) {

        boolean flag = false;

        String str = "THE QUICK BROWN FOR JUMPS OVER LAZY DOG";

        // 1-in this step we are removing white spaces

        str = str.replace(" ", "");

        // 2- in this step we either convert it to lower case or upper case

        //the above string is already in capital letters no need to convert

        //3- we are convert the string to char array

        char []ch = str.toCharArray();

        //4- make a new array of size 26

        int []ar = new int[26];

        //updating values in empty array

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

            ar[ch[i]-65]++;

        }

        //check the values

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

            if(ar[i]==0){

                flag = true;

            }

        }

        if(flag == true){

            System.out.println("it is not a pangram");

        }

        else{

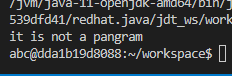
            System.out.println("it is a pangram");

        }

   }

}

OUTPUT-



QUES-23) WHAT ARE MUTABLE STRING IN JAVA, EXPLAN WITH THE HELP OF EXAMPLE?

ANS) MUTABLE STRING- THE STRINGS IN WHICH WE CAN CHANGE THE ORIGINAL OBJECT THROUGH SOME INBUILT FUNCTIONS.

FOR EG- STRINGBUILDER, STRINGBUFFER

public class Mutable {

    // in this the changes are to be done in the real object.

    public static void main(String[] args) {

        StringBuffer sb = new StringBuffer("Prashant");

        sb.append("Saini");

        System.out.println(sb);

        StringBuilder sb1 = new StringBuilder("Prashant");

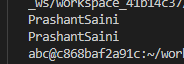
        sb1.append("Saini");

        System.out.println(sb1);

    }

}

OUTPUT-



QUES-24) WRITE A PROGRAM TO REVERSE A STRING.

ANS)

public class Mutable {

    // their are many ways to solve this problem, we use stringbuilder, or stringbuffer; we use inbuilt functions to perform the actions

    public static void main(String[] args) {

        StringBuffer sb = new StringBuffer("PWSKILLS");

        System.out.println(sb.reverse());

    }

}

OUTPUT-



QUES-25) WAP TO SORT STRING ALPHABETICALLY.

ANS)

import java.util.Arrays;

public class Mutable {

 public static void main(String[] args) {

    String str = "Prashant";

    //convert it to lower case

    str = str.toLowerCase();

    //convert the string to char array

    char [] ar1 = str.toCharArray();

    //sort the array by using inbuilt function of array

    Arrays.sort(ar1);

    //prinitng the array

    System.out.println(ar1);

  }

}

OUTPUT-



QUES-26) WAP TO REVERSE A STRING WHILE PRESERVING THE POSITION.

ANS)

import java.util.Arrays;

public class Mutable {

 public static void main(String[] args) {

    String str1 = "Think Twice";

    String str2 = " ";

    String arr[] = str1.split(" ");

    for(String elem:arr){

      for(int i=elem.length()-1; i>=0; i--){

        str2=str2+elem.charAt(i);

      }

    }

    System.out.println(str1); //before reversing

    System.out.println(str2); //after reversing

  }

}

OUTPUT –

