**1.Write a java program to illustrate following String API methods.**

**charAt() , compareTo(), equals(), equalsIgnoreCase(), indexOf(), length() , substring(), toCharArray() , toLowerCase(), toString(), toUpperCase() , trim() , valueOf()**

**CODE:**

import java.util.Scanner;

class Equality

{

public static void main(String [] args)

{

String str="",str2="",str3="",str4="";

int pos;

Scanner sc=new Scanner(System.in);

System.out.println("Enter any String:");

str=sc.next();

System.out.println("Enter another String:");

str2=sc.next();

**//LENGTH OF STRING**

int len=str.length();

System.out.println("LENGTH OF STRING IS: "+len);

**//SEARCH CHARACTER**

System.out.println("Enter the position to be searched:");

pos=sc.nextInt();

if(pos>str.length())

System.out.println("Wrong entry");

else

System.out.println("THE CHARACTER AT POSITION "+pos+" is "+str.charAt(pos));

**//CONVERTING CASE**

str4=str.toUpperCase();

System.out.println("THE UPPER CASE OF THE STRING IS: "+str4);

str3=str.toLowerCase();

System.out.println("THE LOWER CASE OF THE STRING IS: "+str3);

**//CHECK CASE**

if(str.equals(str2))

{

System.out.println("IF WE DON'T IGNORE CASE,BOTH STRINGS ARE EQUAL");

}

else

System.out.println("IF WE DON'T IGNORE CASE,THE STRINGS ARE NOT EQUAL");

if(str.equalsIgnoreCase(str2))

{

System.out.println("IF WE IGNORE CASE,BOTH STRINGS ARE EQUAL");

}

else

System.out.println("IF WE IGNORE CASE,THE STRINGS ARE NOT EQUAL");

**//COMPARE STRINGS**

if(str.compareTo(str2)>1)

System.out.println("1st string is greater than second string");

else if(str.compareTo(str2)<1)

System.out.println("1st string is smaller than second string");

else

System.out.println("BOTH STRINGS ARE EQUAL");

**//CONVERT TO ARRAY**

char[] array=str.toCharArray();

char[] array2=str2.toCharArray();

System.out.println("CONTENT OF ARRAY 1 IS :");

for(char d:array)

{

System.out.println(d);

}

System.out.println("CONTENT OF ARRAY 2 IS :");

for(char e:array)

{

System.out.println(e);

}

**//CONVERT TO STRING**

int k=0;

float f=10.10f;

char ch='A';

long ln=11025;

double d=2222.2323;

char arr[]={'a','b','c'};

String str5=String.valueOf(k);

String str6=String.valueOf(f);

String str7=String.valueOf(ch);

String str8=String.valueOf(ln);

String str9=String.valueOf(d);

String str10=String.valueOf(arr);

System.out.println("THE VALUES ARE:");

System.out.println(str5);

System.out.println(str6);

System.out.println(str7);

System.out.println(str8);

System.out.println(str9);

System.out.println(str10);

}

}

**2. Write a java program to illustrate following StringBuffer API methods.**

**append(), capacity(), charAt(), delete(), deleteCharAt(), ensureCapacity(), getChars(),**

**indexOf(), insert(), length(), setCharAt(), setLength(), substring(), toString() methods),**

**CODE:**

class Program2

{

public static void main(String args[])

{

StringBuffer sb=new StringBuffer("kolkata");

System.out.println(sb);

System.out.println("reverse the string "+sb.reverse());

System.out.println("length of the string "+sb.length());

System.out.println("capacity "+sb.capacity());

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

System.out.println("append "+sb.append("city"));

System.out.println("delete substring "+sb.delete(7,11));

System.out.println("delete from particular index "+sb.deleteCharAt(1));

sb.ensureCapacity(30);

System.out.println("increasing capacity "+sb.capacity());

System.out.println("inser a char" +sb.insert(1,'o'));

System.out.println("append" +sb.append(" is city"));

System.out.println("replace "+sb.replace(10,12," c"));

System.out.println("finding a substring "+sb.substring(1,4));

sb.setCharAt(5,'r');

System.out.println("USING SETCHARAT "+sb);

StringBuffer s=new StringBuffer();

s.setLength(5);

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

/\* char[] a=new char[10];

sb.getchars(0,7,a,0);

System.out.println(a);\*/

}

}

1. **Write a java program for explaining the concept of mutable and immutable string.**

**CODE:**

import java.io.\*;

class C

{

public static void main(String args[])throws IOException

{

int a,c,d;

final int b;

BufferedReader br=new BufferedReader(new InputStreamReader(System.in));

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

String s=br.readLine();

StringBuffer t=new StringBuffer(s);

System.out.println("Enter a new string o concat:");

String r=br.readLine();

s.concat(r);

t.append(r);

System.out.println("String is "+s);

System.out.println("String is "+t);



