1.

Once string object is created its data or state can't be changed. If String Object is changed we should create it as a new Object and assign it to the existed reference.

class Demo{

public static void main(String args[]){

String s1="Chamindu";

s1.concat("@ijse.lk");

System.out.println(s1); //Chamindu

s1=s1.concat("@ijse.lk");

System.out.println(s1);//Chamindu@ijse.lk

}

}

String Objects are unable to replace.If String Object is replced we should create it as a new Object.

class Demo{

public static void main(String args[]){

String s1=new String("niroth");

System.out.println(s1);//niroth

s1.replace('i','I');

System.out.println(s1);//niroth

s1=s1.replace('i','I');

System.out.println(s1);//nIroth

}

}

2.

1. **length()- Returns the length of this string.**

class Demo{

public static void main(String args[]){

String name="Chamindu";

System.out.println("Size name : "+name.length());//**Output:- 8**

}

}

1. **equalsIgnoreCase(String anotherString)-Compares this String to another String without considering the case.**

class Demo{

public static void main(String args[]){

String name1="CHAMINDU";

String name2="chamindu";

System.out.println(name1.equals(name2)); //**false**

System.out.println(name1.equalsIgnoreCase(name2)); //**true**

}

}

1. **compareTo(String anotherString)-**

**This method is used for comparing two strings lexicographically. Each character of both the strings is converted into a Unicode value for comparison. If both the strings are equal then this method returns 0 else it returns positive or negative value.**

class Demo{

public static void main(String args[]) {

String s1 = "a";

String s2 = "b";

int v = s1.compareTo(s2);

System.out.println("s1 & s2 : "+v);// Output:- s1 & s2 :-1

}

}

1. **startsWith(String prefix)- Tests if this string starts with the specified prefix.**

class Demo{

public static void main(String args[]){

String[] nameArray={"Danapala","Gunapala","Somapala"};

System.out.print("starts with Dana :-");

for(String name : nameArray){

if(name.startsWith("Dana")){

System.out.print(" "+name+" ");

}

}

}

}**Output:- starts with Dana :- Danapala**

1. **substring(int beginIndex, int endIndex)-Returns a string that is a substring of this string.**

public class Demo {

public static void main(String[] args) {

String str = "abcdefg";

str = str.substring(3, 5);

System.out.println("substring = " + str);

}

}

1. **concat(String str)- Concatenates the specified string to the end of this string.**

class Demo{

public static void main(String args[]){

String s1="Chamindu";

s1=s1.concat("@ijse.lk");

System.out.println(s1);//Chamindu@ijse.lk

}

}

1. **toUpperCase() - Converts all of the characters in this String to upper case.**

class Demo{

public static void main(String args[]){

String name="chamindu";

System.out.println(name.toUpperCase());//CHAMINDU

}

}

1. **trim()- Returns a string whose value is this string, with any leading and trailing whitespace**

**removed.**

class Demo{

public static void main(String args[]){

String name=" chamindu ";

String newName=name.trim();

System.out.println(newName.length()); //8

}

}

3.

import java.io.\*;

class Demo{

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

InputStreamReader isr=new InputStreamReader(System.in);

BufferedReader br=new BufferedReader(isr);

System.out.print("Input your String 1 : ");

String s1=br.readLine();

System.out.print("Input your String 2 : ");

String s2=br.readLine();

int v = s1.compareTo(s2);

if(v==0){

System.out.println("String 1 & String 2 are equal ");

}else if(v>0){

System.out.println("String 1 is greater than String 2 ");

}else{

System.out.println("String 1 is less than String 2 ");

}

}

}

4.

import java.io.\*;

class Demo{

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

InputStreamReader isr=new InputStreamReader(System.in);

BufferedReader br=new BufferedReader(isr);

System.out.print("Input your String 1 : ");

String s1=br.readLine();

System.out.print("Input your String 2 : ");

String s2=br.readLine();

System.out.print("Input Starting index of String 1: ");

int toffset=Integer.parseInt(br.readLine());

System.out.print("Input Starting index of String 2: ");

int ooffset=Integer.parseInt(br.readLine());

System.out.print("Input the number of characters to be compared: ");

int len=Integer.parseInt(br.readLine());

boolean r = s1.regionMatches(toffset,s2,ooffset,len);

if(r){

System.out.println("Compared Strings are equal ");

}else{

System.out.println("Compared Strings are not equal");

}

}

}

5.

import java.io.\*;

import java.util.\*;

class Demo{

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

Random random = new Random();

String[] artical={"the","a","one","some","any"};

String[] noun={"boy","girl","dog","town","car"};

String[] verb={"drove","jumped","ran","walked","skipped"};

String[] prep={"to","from","over","under","on"};

for(int i=0;i<20;i++){

int articalX= random.nextInt(5);

int nounX=random.nextInt(5);

int verbX=random.nextInt(5);

int prepX=random.nextInt(5);

String s1=artical[articalX];

String firstString=s1.substring(0,1).toUpperCase()+s1.substring(1);

System.out.println(firstString+" "+noun[nounX]+" "+verb[verbX]+" "+prep[prepX]);

}

}

}

6.

import java.io.\*;

import java.util.\*;

class Demo{

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

InputStreamReader isr=new InputStreamReader(System.in);

BufferedReader br=new BufferedReader(isr);

System.out.print("Input the number :");

String num=br.readLine();

String[] tokens1=num.split("\\)");

String[] tokens2=tokens1[0].split("\\(");

String areaCode=tokens2[1];

String[] tokens3=tokens1[1].split("-");

String first2=tokens3[0];

String last5=tokens3[1];

if(areaCode.length()!=3){

System.out.println("invalid area code");

}else if(first2.length()!=2|last5.length()!=5){

System.out.println("invalid number");

}else{

String newNum=first2+last5;

System.out.println("Area code is: "+areaCode);

System.out.println("Phone Number is: "+newNum);

}

}

}

7.

import java.io.\*;

import java.util.\*;

class Demo{

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

InputStreamReader isr=new InputStreamReader(System.in);

BufferedReader br=new BufferedReader(isr);

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

String text=br.readLine();

String[] tokens=text.split(" ");

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

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

}

}

}

8.

import java.io.\*;

import java.util.\*;

class Demo{

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

InputStreamReader isr=new InputStreamReader(System.in);

BufferedReader br=new BufferedReader(isr);

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

String text=br.readLine();

System.out.println(text.toUpperCase());

System.out.println(text.toLowerCase());

}

}

9.

import java.io.\*;

import java.util.\*;

class Demo{

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

InputStreamReader isr=new InputStreamReader(System.in);

BufferedReader br=new BufferedReader(isr);

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

String text=br.readLine();

System.out.print("Search Character : ");

String character=br.readLine();

int count=0;

while(text.indexOf(character)>-1){

count++;

text=text.substring(text.indexOf(character)+1);

}

System.out.println

("number of Characters in the text : "+count);

}

}

10.

import java.io.\*;

import java.util.\*;

class Demo{

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

InputStreamReader isr=new InputStreamReader(System.in);

BufferedReader br=new BufferedReader(isr);

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

String text=br.readLine();

StringTokenizer st=new StringTokenizer(text);

while(st.hasMoreTokens()){

String token=st.nextToken();

if(token.startsWith("b")){

System.out.print(token+" ");

}

}

System.out.println();

}

}

11.

import java.io.\*;

import java.util.\*;

class Demo{

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

InputStreamReader isr=new InputStreamReader(System.in);

BufferedReader br=new BufferedReader(isr);

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

String text=br.readLine();

StringTokenizer st=new StringTokenizer(text);

while(st.hasMoreTokens()){

String token=st.nextToken();

if(token.endsWith("ED")){

System.out.print(token+" ");

}

}

System.out.println();

}

}

12

import java.io.\*;

import java.util.\*;

class Demo{

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

InputStreamReader isr=new InputStreamReader(System.in);

BufferedReader br=new BufferedReader(isr);

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

int code=Integer.parseInt(br.readLine());

System.out.println("Character :"+(char)code);

}

}

class Demo{

public static void main(String args[]){

for(int i=000;i<=255;i++){

System.out.println("Code: "+i+" Character : "+(char)i);

}

}

13

import java.time.\*;

import java.time.format.\*;

import java.io.\*;

class Demo{

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

InputStreamReader isr=new InputStreamReader(System.in);

BufferedReader br=new BufferedReader(isr);

System.out.print("input date(DD/MM/YYYY) : ");

String date=br.readLine();

String[] dateArray=date.split("/");

int year=Integer.parseInt(dateArray[2]);

int month=Integer.parseInt(dateArray[1]);

int dateOfMonth=Integer.parseInt(dateArray[0]);

LocalDate localDate = LocalDate.of(year,month,dateOfMonth);

DateTimeFormatter f = DateTimeFormatter.ofPattern("MMMM dd, yyyy");

System.out.println(localDate.format(f));

}

}

14

import java.io.\*;

import java.util.\*;

class Demo{

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

InputStreamReader isr=new InputStreamReader(System.in);

BufferedReader br=new BufferedReader(isr);

String s=br.readLine();

if(s.length()<=7){

double d=Double.parseDouble(s);

String s1=String.format("%,08.2f",d);

System.out.println(s1);

}else{

System.out.println("Invalid Input");

}

}

}

15

import java.io.\*;

import java.util.\*;

import java.text.DecimalFormat;

class Demo{

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

InputStreamReader isr=new InputStreamReader(System.in);

BufferedReader br=new BufferedReader(isr);

String s=br.readLine();

if(s.length()<=7){

double number=Double.parseDouble(s);

String s1=String.format("%,08.2f",number);

System.out.println(s1);

if(number<1000&&number>1){

numToWord(number);

}

}else{

System.out.println("Invalid Input");

}

}

public static void numToWord(double number){

String[] tensNames = {"","","twenty","thirty","forty","fifty","sixty","seventy","eighty","ninety"};

String[] numNames = {"","one","two","three","four","five","six","seven","eight","nine","ten",

"eleven",

"twelve",

"thirteen",

"fourteen",

"fifteen",

"sixteen",

"seventeen",

"eighteen",

"nineteen"};

int x=0;

int y=0;

int z=0;

if(1000>number&&number>99){

x=(int)number/100;

number=number%100;

}

if(100>number&&number>10){

y=(int)number/10;

number=number%10;

}

if(10>number&&number>0){

number=number\*100;

z=(int)number/100;

number=number%100;

}

if(y>1&&x>0){

System.out.println(numNames[x].toUpperCase()+" hundred "+tensNames[y].toUpperCase()+numNames[z].toUpperCase()+" and "+(int)number+"/100");

}else if(x>0){

System.out.println(numNames[x].toUpperCase()+" hundred "+numNames[y\*10+z].toUpperCase()+" and "+(int)number+"/100");

}else if(y>1){

System.out.println(tensNames[y].toUpperCase()+numNames[z].toUpperCase()+" and "+(int)number+"/100");

}else{

System.out.println(numNames[y\*10+z].toUpperCase()+" and "+(int)number+"/100");

}

}

}

16.

import java.io.\*;

import java.util.\*;

import javax.swing.\*;

import java.awt.event.\*;

import javax.swing.JOptionPane;

class MyFrame extends JFrame{

private HashMap <String,String> hm=new HashMap<>();

private JButton btnTranslate;

private JTextArea txtInput;

private JTextArea txtOutput;

private JLabel lblInput;

MyFrame(){

loadWords();

setSize(500,350);

setTitle("");

setDefaultCloseOperation(3);

setLocationRelativeTo(null);

setLayout(null);

lblInput=new JLabel("Input SMS");

lblInput.setBounds(0,40,100,20);

add(lblInput);

txtInput=new JTextArea();

JScrollPane sp1 = new JScrollPane(txtInput);

sp1.setBounds(100,20,340,100);

add(sp1);

btnTranslate=new JButton("Translate");

btnTranslate.setBounds(100,140,100,20);

add(btnTranslate);

txtOutput=new JTextArea();

JScrollPane sp2 = new JScrollPane(txtOutput);

sp2.setBounds(100,180,340,100);

add(sp2);

txtInput.addKeyListener(new KeyAdapter(){

public void keyPressed(KeyEvent e){

int charMax = 160;

int newLen = 0;

int currLen = txtInput.getText().length();

if(e.getKeyCode() == KeyEvent.VK\_BACK\_SPACE) {

newLen = currLen - 1;

}else{

newLen = currLen + 1;

}

if(newLen==charMax){

JOptionPane.showMessageDialog(null,"Cannot input more than 160 characters");

txtInput.setEnabled(false);

}

}

});

btnTranslate.addActionListener(new ActionListener(){

public void actionPerformed(ActionEvent evt){

String inputTxt=txtInput.getText();

String outputText="";

String[] sw=inputTxt.split(" ");

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

String meaning=searchWord(sw[i].toUpperCase());

if(meaning!=null){

outputText=outputText+" "+meaning;

}else{

outputText=outputText+" "+sw[i];

}

}

txtOutput.setText(outputText);

}

});

}

public void loadWords(){

hm.put("AFAIK","As Far As I Know");

hm.put("AFK","Away From Keyboard");

hm.put("<3","Love");

hm.put("CFATH","Chuckling For All to Hear");

hm.put("THX","Thanks");

hm.put("THNX","Thanks");

hm.put("HAND","Have A Nice Day");

hm.put("CU","See You");

hm.put("CUL","See You Later");

hm.put("SWYP","So What's Your Problem?");

hm.put("TIME","Tears In My Eyes");

hm.put("SWAK","Sealed With a Kiss");

hm.put("HH","Haha");

hm.put("CHX","Chicks");

hm.put("SAL","Such A Laugh");

hm.put("IDK","I don't know");

hm.put("NP","No problem");

hm.put("IHNI","I have no idea");

hm.put("JSYK","Just so you know");

hm.put("IDC","I don't care");

hm.put("KYS","Kill yourself");

hm.put("ATM","At The Moment");

hm.put("WYD","What Are You Doing");

hm.put("WYA","Where Are You At");

hm.put("BTW","By The Way");

hm.put("YOYO","You're On Your Own ");

hm.put("ASAP","As Soon As Possible");

hm.put("OMG","Oh My god");

hm.put("LOL","Laughing Out Loud");

hm.put("MSG","Message");

hm.put("PLZ","Please");

hm.put("ILU","I Love You");

hm.put("BFN","Bye For Now");

hm.put("IMO","In My Opinion");

hm.put("BF","Boyfriend");

hm.put("BFF","Best Friend Forever");

hm.put("GF","Girlfriend");

hm.put("WTH","What The Hell");

hm.put("JK","Just Kidding");

}

public String searchWord(String txt){ return hm.get(txt); }

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

new MyFrame().setVisible(true);

}

}