***Some Specific program based on java language***

**Program1**

class Sample1

{

public static void main(String ajay[])

{

}

}

**Program2**

class HumanBeing

{

int hands = 2;

int legs = 2;

int nose = 1;

public void walking()

{

System.out.println("human being can walk using two legs");

}

public void writing()

{

System.out.println("human being can write using two hands");

}

public void breathing()

{

System.out.println("humans can breath using one nose");

}

public static void main(String surya[])

{

HumanBeing bharti=new HumanBeing();

bharti.writing();

bharti.breathing();

bharti.walking();

}

}

**Program3**

class Car

{

int stearing = 1;

int wheels = 4;

int engine = 1;

public void moveleft()

{

System.out.println("Car can move left by turnup stearing left");

}

public void moving()

{

System.out.println("Car can move forward and backward using four wheels");

}

public void generatepower()

{

System.out.println("Car can generate power using engine");

}

public static void main(String hitesh[])

{

Car bmw = new Car();

bmw.generatepower();

bmw.moving();

bmw.moveleft();

}

}

**Program4**

class Sample2

{

int x = 10;

public void display()

{

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

{

System.out.println(i);

}

}

public static void main(String ajay[])

{

Sample2 obj = new Sample2();

obj.display();

obj.display();

obj.display();

}

}

**Program5**

class Sample3

{

int x=10,y=20;

public void displayreverse()

{

for(int i=y;i>=x;i--)

{

System.out.println(i);

}

}

public static void main(String kratika[])

{

Sample3 obj=new Sample3();

obj.displayreverse();

}

}

**Program6**

class Sample4

{

int x,y;

public void display(int p,int q)

{

x=p;

y=q;

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

{

System.out.println("kratika"+i);

}

}

public static void main(String kratika[])

{

Sample4 obj=new Sample4();

obj.display(105,146);

obj.display(1,10);

}

}

**Program7**

class Sample5

{

public void display(HumanBeing x)

{

x.writing();

x.walking();

x.breathing();

}

public static void main(String aman[])

{

Sample5 obj=new Sample5();

HumanBeing bharti=new HumanBeing();

obj.display(bharti);

}

}

**Program8**

**class Sample6**

**{**

**int x,y;**

**public Sample6()**

**{**

**x=100;**

**y=200;**

**}**

**public void display()**

**{**

**System.out.println(x+y);**

**}**

**public static void main(String kratika[])**

**{**

**Sample6 obj=new Sample6();**

**obj.display();**

**}**

**}**

**Program9**

class Sample7

{

public static void main(String kratika[])

{

HumanBeing arr[]=new HumanBeing[3];//Array Of Objects

arr[0]=new HumanBeing();

arr[1]=new HumanBeing();

arr[2]=new HumanBeing();

arr[0].writing();

arr[0].breathing();

arr[0].walking();

}

}

**Program10**

class Sample8

{

int x,y;

public Sample8(int p,int q)

{

x=p;

y=q;

}

public void display()

{

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

{

System.out.println(i);

}

}

public static void main(String ajay[])

{

Sample8 obj=new Sample8(23,57);

obj.display();

}

}

**Program11**

class Juice

{ //compile time polymorphism or method overloading

//static polymorphism or function overloading

public void preparejuice()

{

System.out.println("apple juice prepared");

}

public void preparejuice(String fruit)

{

System.out.println(fruit+"juice prepared");

}

public void preparejuice(String fruit,String ice)

{

System.out.println(fruit+"juice prepared"+ice);

}

}

class Sample9

{

public static void main(String ajay[])

{

Juice surya=new Juice();

surya.preparejuice();

surya.preparejuice("pineapple","without ice");

surya.preparejuice("grape");

}

}

**Program12**

class Sample10

{

private void display(int x)

{

if(x%2==0)

System.out.println("Even");

else

System.out.println("Odd");

}

}

**Program13**

class Sample11

{

public static void main(String gagan[])

{

Sample10 obj = new Sample10();

obj.display(13);

}

}

**Program14**

class Father

{

private int fproperty=10;

}

class Son extends Father

{

int sproperty = 5;

public void buildhouse()

{

System.out.println("Son can build a house using "+ (sproperty + fproperty) + " lacs");

}

}

class Sample12

{

public static void main(String hitesh[])

{

Son obj = new Son();

obj.buildhouse();

}

}

**Program15**

class A

{

public void displayA()

{

for(int i=1;i<=10;i++)

System.out.println(i);

}

}

class B extends A

{

public void displayB ()

{

for(int i=10;i>=1;i--)

System.out.println(i);

}

}

class C extends A{

public void displayC()

{

for(int i=10;i>=1;i--)

{

if (i%2==0)

System.out.println(i);

}

}

}

class Sample13

{

public static void main(String nimish[])

{

C obj=new C();

obj.displayA();

obj.displayC();

}

}

**Program16**

class Aa

{

public void displayA()

{

for(int i=1;i<=10;i++)

System.out.println(i);

}

}

class Bb extends Aa

{

public void displayB ()

{

for(int i=10;i>=1;i--)

System.out.println(i);

}

}

class Sample14

{

public static void main(String nimish[])

{

Aa obj=new Bb(); //Upcasting

obj.displayA();

}

}

**Program17**

class BlackWhiteTv

{

public void displayvideo()

{

System.out.println("video can visible in blacknwhite");

}

}

class ColorTv extends BlackWhiteTv

{

public void displayvideo()

{

System.out.println("video can visible in color");

}

public void watchblacknwhite()

{

super.displayvideo();

}

}

class Sample15

{

public static void main(String nimish[])

{

BlackWhiteTv obj=new ColorTv();

obj.displayvideo();

}

}

**Program18**

abstract class Electricity

{

public void getbill(int units,int price)

{

System.out.println("total bill="+(units\*price));

}

public abstract int getunitprice();//abstract methods method without body

}

class Residential extends Electricity

{

public int getunitprice()

{

return 3;

}

}

class Commercial extends Electricity

{

public int getunitprice()

{

return 5;

}

}

class Sample16

{

public static void main(String akanksha[])

{

Electricity obj=new Residential();

obj.getbill(100,obj.getunitprice());

Electricity obj1=new Commercial();

obj1.getbill(200,obj1.getunitprice());

}

}

**Program19**

abstract class Bank

{

public void getinterest(int p,int r,int t)

{

System.out.println("Interest amount ="+((p\*r\*t)/100));

}

public abstract int getrateofinterest();

}

class Axis extends Bank

{

public int getrateofinterest()

{

return 8;

}

}

class Icici extends Bank

{

public int getrateofinterest()

{

return 10;

}

}

class Sample17

{

public static void main(String hitesh[])

{

Axis obj = new Axis();

obj.getinterest(1000,obj.getrateofinterest(),2);

Icici obj1 = new Icici();

obj1.getinterest(1000,obj1.getrateofinterest(),2);

}

}

**Program20**

interface Shape

{

float pi=3.14f;

public void area();

}

class Rectangle implements Shape

{

public void area()

{

int l=20,b=40;

System.out.println("Area of Rectangle ="+(l\*b));

}

}

class Circle implements Shape

{

public void area()

{

float r=3.26f;

System.out.println("Area of Circle="+(pi\*r\*r));

}

}

class Sample18

{

public static void main(String alisha[])

{

Shape obj=new Rectangle();

obj.area();

Shape obj1=new Circle();

obj1.area();

}

}

**Program21**

class Sample19

{

public static void main(String arr[]) // command line arguments

{

System.out.println(arr[0]);

System.out.println(arr[1]);

System.out.println(arr[2]);

}

}

**Program22**

class Sample20

{

public void add(String s1,String s2)

{

System.out.println(s1+s2);

}

public static void main(String arr[]) // command line arguments

{

Sample20 obj = new Sample20();

obj.add(arr[0],arr[1]);

}

}

**Program23**

class Sample21

{

public static void main(String arr[])

{

String s1 = "123",s2="241";

Integer obj = new Integer(100);

System.out.println(obj.intValue());

Float obj1 = new Float(4.5f);

System.out.println(obj1.floatValue());

int x = Integer.parseInt(s1);

int y = Integer.parseInt(s2);

System.out.println(x+y);

}

}

**Program24**

class Sample22

{

public static void main(String arr[])

{

float f1 = Float.parseFloat(arr[0]);

float f2 = Float.parseFloat(arr[1]);

System.out.println(f1\*f2);

}

}

**Program25**

class Sample24

{

public static void main(String arr[])

{

String obj = new String("Welcome to hinDUsTan COLLeGE");

System.out.println("obj.length()");

System.out.println("obj.toUpperCase()");

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

System.out.println("obj.charAt(10)");

System.out.println("obj.startsWith("Bel")");

System.out.println("obj.endsWith("eGE")");

System.out.println("obj.concat(" world")");

System.out.println("obj.contains("for")");

System.out.println("obj.equals("Welcome to hinDUsTan COLLEGE")");

System.out.println("obj.equalsIgnoreCase("Welcome to hinDUsTan COLLEGE")");

System.out.println("obj.indexOf("to")");

}

}

**Program26**

class Sample25

{

public static void main(String arr[])

{

String obj = new String("Welcome to hinDUsTan COLLeGE");

String brr[]=obj.split("o");

System.out.println(brr[0]);

System.out.println(brr[1]);

System.out.println(brr[2]);

char crr[] = obj.toCharArray();

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

System.out.println(crr[i]);

}

}

**Program27**

// ASCII

/\*class Sample26

{

public static void main(String arr[])

{

String obj = new String("wel come");

char crr[] = obj.toCharArray();

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

{

if(crr[i]!=' ')

System.out.println((char)(crr[i]-32));

}

}

}\*/

class Sample26

{

public void toUpperCase(String obj)

{

char crr[] = obj.toCharArray();

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

{

if(crr[i]!=' ')

System.out.println((char)(crr[i]-32));

}

}

public static void main(String arr[])

{

String obj = new String(arr[0]);

Sample26 s=new Sample26();

s.toUpperCase(obj);

}

}

**Program28**

class Sample27

{

public static void main(String arr[])

{

String usr = new String(arr[0]); //WEL@surya

String pwd = new String(arr[1]); //hello

String cpwd = new String(arr[2]); //hello

if(pwd.equals(cpwd) && usr.length()>=5 && usr.startsWith("WEL") && usr.contains("@"))

System.out.println("Login Success");

else

System.out.println("Login Failed");

}

}

**Program29**

**public** **class** Sample28

{

**public** **static** **void** main(String[] args)

{

String str=**new** String("WeL15Co7mE");

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

{

**char** ch = str.charAt(i);

**if**(Character.*isDigit*(ch))

System.***out***.println(ch);

}

}

}

**Program30**

**public** **class** Sample29

{

**public** **static** **void** main(String[] args)

{

StringBuffer obj = **new** StringBuffer("welcome to java world");//mutable class

System.***out***.println(obj.length());

System.***out***.println(obj.charAt(3));

System.***out***.println(obj.indexOf("to"));

System.***out***.println(obj.equals("welcome to java world"));

obj.append(" surya");

System.***out***.println(obj);

obj.insert(8, "ANKIT ");

System.***out***.println(obj);

obj.delete(0, 7);

System.***out***.println(obj);

obj.deleteCharAt(0);

System.***out***.println(obj);

obj.reverse();

System.***out***.println(obj);

}

}

**Program31**

**public** **class** Sample30

{

**public** **static** **void** main(String[] args)

{

String str = **new** String("surya satya anmol suresh kiran aman sukumar");

StringBuffer sb = **new** StringBuffer();

String arr[]=str.split(" ");

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

{

**if**(arr[i].startsWith("su"))

sb.append((arr[i]+" "));

}

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

}

}

**Program32**

**public** **class** Sample31

{

**public** **static** **void** main(String[] args)

{

String usr = **new** String("surya");

String pwd = **new** String("ayruz");

StringBuffer sb = **new** StringBuffer(pwd);

**if**(usr.equals(sb.reverse().toString()))

System.***out***.println("Login Success");

**else**

System.***out***.println("Login failure");

}

}

**Program33**

**public** **class** Sample32

{

**public** **static** **void** main(String[] args)

{

//All are runtime exception

**try**

{

String s = **new** String("welcome");

System.***out***.println(s.charAt(10));

}

**catch**(StringIndexOutOfBoundsException se)

{

System.***out***.println("Index not found");

}

//int arr[] = new int[-5];

//System.out.println(arr.length);

//int n=Integer.parseInt("145");

//int n=Integer.parseInt("surya");

//System.out.println(n/5);

//int n1=100,n2=0;

//System.out.println(n1/n2);

//String obj = null;

//System.out.println(obj.length());

}

}

**Program34**

**public** **class** Sample33

{

**public** **static** **void** main(String[] args)

{

**try**

{

**int** arr[] = **new** **int**[5];

System.***out***.println(arr.length);

**int** n = Integer.*parseInt*("shiv");

String obj = **null**;

System.***out***.println(obj.length());

}

**catch**(NegativeArraySizeException ne)

{

System.***out***.println("Can not create negative arrays");

}

**catch**(NullPointerException ne)

{

System.***out***.println("Null pointer exception");

}

**catch**(Exception e)

{

System.***out***.println(e.getMessage());

}

}

}

**Program35**

**public** **class** Sample34

{

**public** **static** **void** main(String[] args)

{

**try**

{

**int** n=Integer.*parseInt*("surya");

System.***out***.println(n/5);

}

**catch**(NumberFormatException e)

{

System.***out***.println("Please provide the number");

}

}

}

**Program36**

**public** **class** Sample35

{

**public** **static** **void** main(String[] args)

{

**try**

{

**int** n1=100,n2=0;

System.***out***.println(n1/n2);

}

**catch**(ArithmeticException e)

{

System.***out***.println(e.getMessage());

}

}

}

**Program37**

**public** **class** Sample36

{

**public** **static** **void** main(String[] args)

{

//every catch block should have a try block but vice-versa not necessary..

**try**

{

String obj = **null**;

System.***out***.println(obj.length());

}

/\*catch(NullPointerException ne)

{

System.out.println(ne.getMessage());

System.out.println("Null pointer exception");

}\*/

**finally**

{

System.***out***.println("Welcome");

}

}

}

//Object-->Throwable-->Exception-->All type of exception

**Program38**

**class** BankException **extends** Exception

{

**public** BankException()

{

System.***out***.println("Insufficient funds");

}

}

**public** **class** Sample37

{

**public** **static** **void** main(String[] args) **throws** Exception

{

**int** cur\_bal=1000,withdraw\_amt=5000;

**try**

{

**if**(withdraw\_amt>cur\_bal)

{

**throw** **new** BankException(); //System.out.println("Insufficient funds");

}

**else**

{

System.***out***.println(cur\_bal-withdraw\_amt);

}

}

**catch**(BankException be)

{

}

}

}

**Program39**

**package** shiv;

**public** **class** Demo

{

**int** x,y;

**public** **void** display(**int** p,**int** q)

{

x=p;

y=q;

**for**(**int** i=x;i<=y;i++)

System.***out***.println(i);

}

}

**import** shiv.Demo;

**public** **class** Sample38

{

**public** **static** **void** main(String[] args)

{

Demo obj = **new** Demo();

obj.display(23, 50);

}

}

**Program40**

**import** java.util.ArrayList;

**public** **class** Sample39

{

**public** **static** **void** main(String[] args)

{

ArrayList obj = **new** ArrayList();

obj.add(100);

obj.add(4.5f);

obj.add("shiv");

obj.add(**true**);

obj.add(100);//arrayList allows duplicates

System.***out***.println(obj);

System.***out***.println(obj.size());

System.***out***.println(obj.get(1));

System.***out***.println(obj.contains("satya"));

obj.add(1, "Ankita");

System.***out***.println(obj);

System.***out***.println(obj.size());

obj.remove("shiv");

System.***out***.println(obj);

}

}

**Program41**

**import** java.util.ArrayList;

**public** **class** Sample40

{

**public** **static** **void** main(String[] args)

{

ArrayList obj = **new** ArrayList();

obj.add(100);

obj.add(4.5f);

obj.add("shiv");

obj.add(**true**);

obj.add(100);

**for**(**int** i=0;i<obj.size();i++)

{

Object o = obj.get(i);

**if**(o **instanceof** Integer)//if(o instanceof String/Float/Boolean)

System.***out***.println(o);

}

}

}

**Program42**

**import** java.util.ArrayList;

**public** **class** Sample41

{

**public** **static** **void** main(String[] args)

{

ArrayList obj = **new** ArrayList();

obj.add("surya");

obj.add("kishor");

obj.add("suresh");

obj.add("rajat");

obj.add("kiran");

**for**(**int** i=0;i<obj.size();i++)

{

Object o = obj.get(i);

String s = (String) o;//Downcasting

**if**(s.startsWith("su"))

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

}

}

}

**Program43**

**import** java.util.LinkedList;

**public** **class** Sample42

{

**public** **static** **void** main(String[] args)

{

LinkedList obj = **new** LinkedList();

obj.add("surya");

obj.add("kishor");

obj.add("suresh");

obj.add("rajat");

obj.add("kiran");

obj.add("surya");

obj.addFirst(100);//LinkedList method

obj.addLast(200);//LinkedList method

System.***out***.println(obj);

System.***out***.println(obj.getFirst());

System.***out***.println(obj.getLast());

obj.removeFirst();

obj.removeLast();

System.***out***.println(obj);

//System.out.println("hello");

obj.removeFirstOccurrence("surya");

System.***out***.println(obj);

obj.removeLastOccurrence("surya");

System.***out***.println(obj);

}

}

**Program44**

**import** java.util.LinkedList;

**import** java.util.Iterator;

**public** **class** Sample43

{

**public** **static** **void** main(String[] args)

{

LinkedList obj = **new** LinkedList();

obj.add("surya");

obj.add("kishor");

obj.add("suresh");

obj.add("rajat");

obj.add("kiran");

obj.add("surya");

Iterator itr = obj.iterator();//iterator() is a function belong to LinkedList

**while**(itr.hasNext())

{

Object o = itr.next();

String s = (String)o;

**if**(s.length()>5)

System.***out***.println(o);

//System.out.println(o);

}

}

}

**Program45**

**import** java.util.LinkedList;

**import** java.util.Iterator;

**public** **class** Sample44

{

**public** **static** **void** main(String[] args)

{

LinkedList obj = **new** LinkedList();

obj.add(12);

obj.add(23);

obj.add(45);

obj.add(64);

obj.add(88);

obj.add(31);

Iterator itr = obj.iterator();//iterator() is a function belong to LinkedList

**while**(itr.hasNext())

{

Object o = itr.next();

Integer i = (Integer)o;

**int** x = i.intValue();

**if**(x%2==0)

System.***out***.println(x);

}

}

}