**Wrapper Classes Programes:-**

package wrapperclasses;

import java.io.BufferedReader;

import java.io.IOException;

import java.io.InputStreamReader;

public class byte1 {

/\*\*

\* @author Lakshman

\*

\*/

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

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

System.out.println("enter the byte no:");

String s1=br.readLine();

Byte b1=new Byte(s1);

System.out.println("enter the byte no:");

String s2=br.readLine();

Byte b2=new Byte(s2);

int n=b1.compareTo(b2);

if (n==0)

System.out.println("both bytes are same");

else if(n<0)System.out.println(b1+ ":is less");

else System.out.println(b2+ ":is less");

}

}

package wrapperclasses;

import java.io.BufferedReader;

import java.io.IOException;

import java.io.InputStreamReader;

public class character1 {

/\*\*

\* @author Lakshman

\*

\*/

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

char ch;

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

while(true){

System.out.println("enter a char:");

ch=(char)br.read();

System.out.println("u enetered:");

if (Character.isDigit(ch))

System.out.println("a digit");

else if(Character.isUpperCase(ch))

System.out.println("an uppercase letter");

else if(Character.isLowerCase(ch))

System.out.println("an lowercase letter");

else if(Character.isSpaceChar(ch))

System.out.println("an spacebar char");

else if(Character.isWhitespace(ch)){

System.out.println("an whitespace char");

return;

}

else

System.out.println("sorry, i dn't know that enter key");

br.skip(2);

}

}

}

package wrapperclasses;

import java.io.BufferedReader;

import java.io.IOException;

import java.io.InputStreamReader;

public class convertions {

/\*\*

\* @author Lakshman

\*

\*/

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

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

System.out.println("enter a integer");

String str=br.readLine();

int i=Integer.parseInt(str);

System.out.println("in decimal:"+i);

str=Integer.toBinaryString(i);

System.out.println("in binary:"+str);

str=Integer.toHexString(i);

System.out.println("in hexdecimal:"+str);

str=Integer.toOctalString(i);

System.out.println("in octal:"+str);

}

}

**package** wrapperclasses;

**public** **class** randomno {

/\*\*

\* **@author** Lakshman

\*

\*/

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

System.*out*.println("random no's b/w 0 to 10");

**while**(**true**){

**double** d=10\*Math.*random*();

**int** i=(**int**)d;

System.*out*.println(i);

Thread.*sleep*(2000);

**if**(i==0)System.*exit*(0);

}

}

}

**Collection Framework Programes:-**

**package** collections;

**import** java.util.\*;

**public** **class** linkedlist1 {

/\*\*

\* **@author** Lakshman

\*

\*/

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

LinkedList ll=**new** LinkedList ();

System.*out*.println ("CONTENTS OF l1 = "+ll);

System.*out*.println("SIZE = "+ll.size ());

ll.add(**new** Integer(10));

ll.add (**new** Integer (20));

ll.add (**new** Integer (30));

ll.add (**new** Integer (40));

System.*out*.println ("CONTENTS OF ll = "+ll);

System.*out*.println ("SIZE = "+ll.size ());

// retrieving data of ll using toArray ()

Object obj []=ll.toArray ();

**int** s=0;

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

{

Integer io= (Integer) obj [i];

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

s=s+x;

}

System.*out*.println ("SUM USING toArray () = "+s);

ll.addFirst (**new** Integer (5));

ll.addFirst (**new** Integer (6));

System.*out*.println ("CONTENTS OF ll = "+ll);

System.*out*.println ("SIZE = "+ll.size ());

// retrieving data of ll using iterator ()

Iterator itr=ll.iterator ();

**int** s1=0;

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

{

Object obj1=itr.next ();

Integer io1= (Integer) obj1;

**int** x1=io1.intValue ();

s1=s1+x1;

}

System.*out*.println ("SUM USING iterator () = "+s1);

}

}

package collections;

//statically add variables to "Hashmap" class obj;

//This program author:lakshman date:10Nov2011

import java.util.\*;

class Hashmap

{

/\*\*

\* @author Lakshman

\*

\*/

public static void main (String [] args)

{

HashMap hm=new HashMap ();

System.out.println ("CONTENTS OF hm = "+hm);

System.out.println ("SIZE OF hm = "+hm.size ());

hm.put (new Integer (10), new Float(129.97f));

hm.put (new Integer (1), new Float(143.93f));

hm.put (new Integer (100), new Float(99.8f));

System.out.println ("CONTENTS OF hm = "+hm);

System.out.println ("SIZE OF hm = "+hm.size ());

Set s=hm.entrySet ();

Iterator itr=s.iterator ();

while (itr.hasNext ())

{

Map.Entry me= (Map.Entry) itr.next ();

Object kobj=me.getKey ();

Object vobj=me.getValue ();

System.out.println (vobj+"-->"+kobj);

}

}

}

package collections;

//map collection contain un-order way

//the pair contains key and value

//we can access required element using map

import java.util.\*;

public class HashMapDemo {

/\*\*

\* @author Lakshman

\*

\*/

public static void main(String args[]){

HashMap<String, Integer> h1=new HashMap<String, Integer>();

h1.put("aaa", 101);

h1.put("bbb", 102);

h1.put("ccc", 103);

h1.put("ddd", 104);

int i=h1.get("ccc");

System.out.println(i);

Set s1=h1.keySet();

Iterator<String> i1=s1.iterator();

while(i1.hasNext()){

String key=i1.next();

System.out.println(key);

}

}

}

package collections;

//statically add variables to "Hashset" class obj;

//This program author:lakshman date:10Nov2011

import java.util.\*;

class Hashset

{

/\*\*

\* @author Lakshman

\*

\*/

public static void main (String [] args)

{

HashSet hs=new HashSet ();

System.out.println ("CONTENTS OF hs = "+hs);

System.out.println ("SIZE OF hs = "+hs.size ());

hs.add (new Integer (17));

hs.add (new Integer (188));

hs.add (new Integer (-17));

hs.add (new Integer (20));

hs.add (new Integer (200));

hs.add (new Integer (177));

System.out.println ("CONTENTS OF hs = "+hs);

System.out.println ("SIZE OF hs = "+hs.size ());

Iterator itr=hs.iterator ();

while (itr.hasNext ())

{

Object obj=itr.next ();

System.out.println (obj);

}

}

}

package collections;

//statically add variables to "Hashset" class obj;

//This program author:lakshman date:10Nov2011

import java.util.Iterator;

import java.util.TreeSet;

public class Tset {

/\*\*

\* @author Lakshman

\*

\*/

public static void main(String[] args) {

// TODO Auto-generated method stub

TreeSet ts=new TreeSet ();

System.out.println ("CONTENTS OF ts = "+ts);

System.out.println ("SIZE OF ts = "+ts.size ());

ts.add (new Integer (17));

ts.add (new Integer (188));

ts.add (new Integer (-17));

ts.add (new Integer (20));

ts.add (new Integer (200));

ts.add (new Integer (177));

System.out.println ("CONTENTS OF ts = "+ts);

System.out.println ("SIZE OF ts = "+ts.size ());

Iterator itr=ts.iterator ();

while (itr.hasNext ())

{

Object obj=itr.next ();

System.out.println (obj);

}

}

}

package collections;

//statically add variables to "Treemap" class obj;

//This program author:lakshman date:10Nov2011

import java.util.\*;

class Treemap

{

/\*\*

\* @author Lakshman

\*

\*/

public static void main (String [] args)

{

TreeMap tm=new TreeMap ();

System.out.println ("CONTENTS OF tm = "+tm);

System.out.println ("SIZE OF tm = "+tm.size ());

tm.put (new Integer (10), new Float(129.97f));

tm.put (new Integer (1), new Float(143.93f));

tm.put (new Integer (100), new Float(99.8f));

System.out.println ("CONTENTS OF tm = "+tm);

System.out.println ("SIZE OF tm = "+tm.size ());

Set s=tm.entrySet ();

Iterator itr=s.iterator ();

while (itr.hasNext ())

{

Map.Entry me= (Map.Entry) itr.next ();

Object kobj=me.getKey ();

Object vobj=me.getValue ();

System.out.println (vobj+"-->"+kobj);

}

}

}

package collections;

//statically add variables to "vector" class obj;

//This program author:lakshman date:10Nov2011

import java.util.\*;

class vector

{

/\*\*

\* @author Lakshman

\*

\*/

public static void main (String [] args)

{

Vector v=new Vector ();

v.addElement (new Integer (10));

v.addElement (new Float (100.37f));

v.addElement (new Boolean (true));

v.addElement ("Lakshman");

System.out.println ("SIZE = "+v.size ());

System.out.println ("CONTENTS = "+v);

Enumeration en=v.elements();

while (en.hasMoreElements ())

{

Object val=en.nextElement ();

System.out.println (val);

}

}

}

package collections;

//statically add variables to "hashtable" class obj;

//This program author:lakshman date:10Nov2011

import java.util.\*;

class hashtable

{

/\*\*

\* @author Lakshman

\*

\*/

public static void main (String [] args)

{

Hashtable ht=new Hashtable ();

ht.put ("AP","Hyd");

ht.put ("Orissa","Bhuvaneshwar");

ht.put ("Karnatake","Bng");

ht.put ("TN","Chennai");

ht.put ("Bihar","Patna");

System.out.println (ht);

Enumeration en=ht.keys ();

while (en.hasMoreElements ())

{

Object k=en.nextElement ();

Object v=ht.get (k);

System.out.println (k+" "+v);

}

if (args.length==0)

{

System.out.println ("PASS THE STATE");

}

else

{

String st=args [0];

Object cap=ht.get (st);

if (cap==null)

{

System.out.println (cap+" IS THE CAPITAL OF "+st);

}

}

}

}

**package** collections;

**import** java.util.\*;

**public** **class** VectorDemo {

/\*\*

\* **@author** Lakshman

\*

\*/

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

Vector<String> v1=**new** Vector<String>();

v1.add("raju");

v1.add("ravi");

v1.add("sita");

v1.add("geetha");

System.*out*.println("size is :"+v1.size());

/\*for(int i=0;i<v1.size();i++){

//System.out.println("vector values are :"+v1);

String s=v1.elementAt(i);

}\*/

//enhanced for loop

**for**(String s:v1){

System.*out*.println(s);

}

}

}

**Generics Programes:-**

**package** generics;

/\*\*

\* **@author** Lakshman

\*

\*/

**class** gen<T> {

T obj;

gen(T obj){

**this**.obj=obj;

}

T getobj(){

**return** obj;

}

}

**class** gen1{

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

Integer i=12; //same as Integer i=new Integer(12);

gen<Integer> obj=**new** gen<Integer>(i);

System.*out*.println("u stored :"+obj.getobj());

Float f=12.123f; //same as Float i=new Float(12.123f);

gen<Float> obj1=**new** gen<Float>(f);

System.*out*.println("u stored :"+obj1.getobj());

gen<String> obj2=**new** gen<String>("Hai My Dear MCA Rocks");

System.*out*.println("u stored :"+obj2.getobj());

}

}

**package** generics;

/\*\*

\* **@author** Lakshman

\*

\*/

**class** gen0 {

**static** <T>**void** display(T[] arr)

{

**for** (T i : arr)

System.*out*.println(i);

}

}

**public** **class** gen2

{

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

// **TODO** Auto-generated method stub

Integer arr1[]={1,2,3,4,5,6};

System.*out*.println("reading integer object:");

gen0.*display*(arr1);

Double arr2[]={1.1,2.2,3.3,4.4,5.5,6.6};

System.*out*.println("reading double object:");

gen0.*display*(arr2);

String arr3[]={"lakshman","durga","bhavani","sailakshmi","A.V.N","hyma"};

System.*out*.println("reading string object:");

gen0.*display*(arr3);

}

}

**package** generics;

/\*\*

\* **@author** Lakshman

\*

\*/

**interface** Fruit<T> {

**void** tellTaste(T fruit);

}

**class** AnyFruit<T> **implements** Fruit<T>{

**public** **void** tellTaste(T fruit){

String fruitname=fruit.getClass().getName();

**if** (fruitname.equals("Banana"))

System.*out*.println("Banana is sweet");

**else** **if**(fruitname.equals("orange"));

System.*out*.println("orange is sour");

} }

**class** Banana

{

}

**class** Orange

{

}

**class** Gen4{

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

Banana b=**new** Banana();

AnyFruit<Banana> fruit1=**new** AnyFruit<Banana>();

fruit1.tellTaste(b);

Orange o=**new** Orange();

AnyFruit<Orange> fruit2=**new** AnyFruit<Orange>();

fruit2.tellTaste(o);

}

}

**package** generics;

/\*\*

\* **@author** Lakshman

\*

\*/

**import** java.util.Hashtable;

**public** **class** Ht1 {

/\*\*

\* **@param** args

\*/

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

// **TODO** Auto-generated method stub

Hashtable ht=**new** Hashtable();// here not taken generic type

ht.put("laxman", **new** Integer(40)); //auto boxing is not done here

ht.put("sachin", **new** Integer(50));

ht.put("dhoni", **new** Integer(60));

String s="sachin";

Integer score=(Integer)ht.get(s);//here type casing is done

System.*out*.println("score="+score);

}

}

**package** generics;

/\*\*

\* **@author** Lakshman

\*

\*/

**import** java.util.Hashtable;

**public** **class** Ht2 {

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

// **TODO** Auto-generated method stub

Hashtable<String,Integer> ht=**new** Hashtable<String,Integer>();// here taken generic type

ht.put("lakshman", 40); //auto boxing is done here

ht.put("sachin", 50);

ht.put("dhoni", 60);

String s="sachin";

Integer score=ht.get(s); //no type casing here

System.*out*.println("score="+score);

}

}