**Date:-8/5/2019 java class-4**

**package** mypackage;

**import** java.lang.reflect.Array;

**import** java.util.Arrays;

**public** **class** array {

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

//first way of declaring an int array

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

numbers[0]=10;

numbers[1]=20;

numbers[2]=30;

numbers[3]=40;

numbers[4]=50;

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

System.***out***.println(numbers[i]);

}

System.***out***.println("Size of the array:"+ numbers.length);

System.***out***.println(Arrays.*toString*(numbers));// to print all values

//secondry way of declaring an int array

**int**[] nums = {2,4,5,6,7,8,9,0};

System.***out***.println(nums[0]);

**for** (**int** i : numbers) { // for each loop

System.***out***.println(i);// or enhanced for loop

String [] cities= {"newyork","albany","boston","toronto"};

**for**(String city:cities) {

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

**int**[] source= {0,1,2,3,4};

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

System.*arraycopy*(source,0,dest,0,3);

System.***out***.println(Arrays.*toString*(dest));

**package** mypackage;

**public** **class** ArraryDemo{

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

**int**[] numbers = {1,2,3,4,5};//2-D array

**int**[] [] twoDArray = {{1,2,3,4,5},{21,22,23,24,25}};

System.***out***.println(twoDArray[0] [2]);

**package** mypackage;

**public** **class** ArraryDemo{

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

**int**[] numbers = {1,2,3,4,5};//2-D array

**int**[] [] twoDArray = {{1,2,3,4,5},{21,22,23,24,25}};

System.***out***.println(twoDArray[0] [2]);

**for** (**int** i = 0; i < 2;i++) {

**for** (**int** j = 0; j < 5;j++) {

System.***out***.println(twoDArray[i][j]);

}

}

}

}

Result:-

10

20

30

40

50

Size of the array:5

[10, 20, 30, 40, 50]

2

10

newyork

[0, 1, 2, 0, 0]

albany

[0, 1, 2, 0, 0]

boston

[0, 1, 2, 0, 0]

toronto

[0, 1, 2, 0, 0]

20

newyork

[0, 1, 2, 0, 0]

albany

[0, 1, 2, 0, 0]

boston

[0, 1, 2, 0, 0]

toronto

[0, 1, 2, 0, 0]

30

newyork

[0, 1, 2, 0, 0]

albany

[0, 1, 2, 0, 0]

boston

[0, 1, 2, 0, 0]

toronto

[0, 1, 2, 0, 0]

40

newyork

[0, 1, 2, 0, 0]

albany

[0, 1, 2, 0, 0]

boston

[0, 1, 2, 0, 0]

toronto

[0, 1, 2, 0, 0]

50

newyork

[0, 1, 2, 0, 0]

albany

[0, 1, 2, 0, 0]

boston

[0, 1, 2, 0, 0]

toronto

[0, 1, 2, 0, 0]

**8/12/19-java class**

**package** mypackage;

**public** **class** Arrays {

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

**int**[]numbers= {2,34,5,65,76,889,643,32,782,3,0};

Arrays.*sort*(numbers); // sorting in a ascending manner

System.***out***.println(numbers[(numbers.length)-1]); // from last index

System.***out***.println(numbers[0]);// from the first index

}

**private** **static** **void** sort(**int**[] numbers) {

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

}

}

**package** mypackage;

**import** java.util.ArrayList;

**import** java.util.List;

**public** **class** ListDemo {

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

List<Integer>numbers=**new** ArrayList<Integer> (); //List

numbers.add(10);

numbers.add(20);

numbers.add(30);

numbers.add(40);

numbers.add(50);

System.***out***.println(numbers); // Printing values of the list

}

}

[10, 20, 30, 40, 50]

**package** mypackage;

**import** java.util.ArrayList;

**import** java.util.List;

**public** **class** ListDemo {

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

List<Integer>numbers=**new** ArrayList<Integer> (); //List

numbers.add(10);

numbers.add(20);

numbers.add(30);

numbers.add(40);

numbers.add(50);

//printing an element from specfied index position(2)

System.***out***.println(numbers.get(2));//syso numbers.get and index position

System.***out***.println(numbers.get(4));

System.***out***.println(numbers); // Printing values of the list

}

}

30

50

[10, 20, 30, 40, 50]

For loop

**package** mypackage;

**import** java.util.ArrayList;

**import** java.util.List;

**public** **class** ListDemo {

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

List<Integer>numbers=**new** ArrayList<Integer> (); //List

numbers.add(10);

numbers.add(20);

numbers.add(30);

numbers.add(40);

numbers.add(50);

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

System.***out***.println(numbers.get(i));// Ln -Line

System.***out***.print(numbers.get(i)+ "/");

}

}

}

10

20

30

40

50

[10, 20, 30, 40, 50]

10/20/30/40/50/

**for** (Integer num : numbers) { // for foreach-ietarte

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

10

20

30

40

50

numbers.forEach(System.***out***::print);

1020304050

**package** mypackage;

**import** java.util.ArrayList;

**import** java.util.List;

**public** **class** ListDemo {

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

List<String>cities=**new** ArrayList<String> (); //List

cities.add("new york");// 0 index position

cities.add("boston");// 1 index position

cities.add("richmond");// 2 index position

cities.add("dallas");// 3 index position

cities.add("jersey city");// 4 index position

cities.add("albany");

cities.add(4, "woodside");

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

**package** mypackage;

**import** java.security.cert.CollectionCertStoreParameters;

**import** java.util.ArrayList;

**import** java.util.Collections;

**import** java.util.List;

**public** **class** ListDemo {

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

List<String>cities=**new** ArrayList<String> (); //List

cities.add("new york");// 0 index position

cities.add("boston");// 1 index position

cities.add("richmond");// 2 index position

cities.add("dallas");// 3 index position

cities.add("jersey city");// 4 index position

cities.add("albany");

cities.add("woodside");

Collections.*sort*(cities);// sorting elements alphabetically//collection.sort & select sort list.

System.***out***.println(cities);//ci ctlr space

[new york, boston, richmond, dallas, woodside, jersey city, albany]

Collections.*sort*(cities,Collections.*reverseOrder*());

**package** mypackage;

**import** java.security.cert.CollectionCertStoreParameters;

**import** java.util.ArrayList;

**import** java.util.Collections;

**import** java.util.List;

**public** **class** ListDemo {

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

List<Object>objList=**new** ArrayList<Object> (); //List

objList.add("new york");// 0 index position

objList.add(12.343);// 1 index position

objList.add(1234);// 2 index position

objList.add(123443.65656f);// 3 index position

objList.add('C');// 4 index position

objList.add(**true**);

objList.add(23345654L);

System.***out***.print(objList);

[new york, 12.343, 1234, 123443.66, C, true, 23345654]

objList.remove("boston"); //remove

[new york, null, null, 123443.66, C, true, 23345654]

objList.remove(4);//removing from 4th index

[new york, null, null, 123443.66, true, 23345654]

objList.clear();//clear list

System.***out***.println("before clearing:"+ objList);// before clearing

before clearing:[new york, null, null, 123443.66, C, true, 23345654]

[]

System.***out***.println(objList.size());//size of the list

7

System.***out***.println(objList.indexOf(**true**));//index of

5

System.***out***.println(objList.lastIndexOf(23345654L));// last index value

6

Iterator<Object>oit=objList.iterator();// Iterator class is used to

**while** (oit.hasNext()) {

Object value = oit.next();

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

**while** (oit.hasNext()) { // while Iterate to Iterator

Object object = (Object) oit.next();

}

new york

null

null

123443.66

C

true

23345654

Collection asending

**package** mypackage;

**import** java.util.ArrayList;

**import** java.util.Collections;

**import** java.util.Iterator;

**import** java.util.List;

**public** **class** ListDemo {

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

List<Integer>numbers=**new** ArrayList<Integer>(); //List

numbers.add(43);

numbers.add(86);

numbers.add(234);

numbers.add(498);

numbers.add(12);

Collections.*sort*(numbers);

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

System.***out***.println("Min value:"+ numbers.get(0));

}

}

[12, 43, 86, 234, 498]

Min value:12

Collections.*sort*(numbers,Collections.*reverseOrder*());

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

System.***out***.println("Max value:"+ numbers.get(0));

[498, 234, 86, 43, 12]

Max value:498

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Wrapper classes:-

**package** mypackage;

**public** **class** WrapperDemo {

**public** **static** **void** main(String[]args) { //primitive ->object

**int** x=30;

Integer y=Integer.*valueOf*(x);

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

Integer z=x;//Integer.value of(x) autoboxing

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

}

}

**package** mypackage;

**public** **class** WrapperDemo {

**public** **static** **void** main(String[]args) { //primitive ->object

**int** x=30;

Integer y=Integer.*valueOf*(x);

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

Integer z=x;//Integer.value of(x) autoboxing

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

Double d = **new** Double(10.25);//object->primitive

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

**double** e= d.doubleValue();

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

**double** e = d; // doubleValue() unboxing

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

}

}

y=30

z=30

d=10.25

e=10.25