**How to get the synchronized version of ArrayList ?**

By default, all the methods in array list are non-synchronized but we can get the synchronized version of arraylist by using collection class synchronized list method.

Example – ArrayList al= new ArrayList(); //this is non-synchronized

List list=Collections.synchronizedList(al); // this is synchronized

1. Program for copy one arraylist into another arraylist.

**package** com.arraylist;

**import** java.util.ArrayList;

**import** java.util.Iterator;

**public** **class** ArrayListDemo1 {

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

ArrayList<Integer> al = **new** ArrayList<Integer>();

al.add(10); // 0th index

al.add(20); // 1st index

al.add(30); // 2nd index

ArrayList<Integer> al2 = **new** ArrayList<Integer>();

al2.add(40); // 0th index

al2.add(50); // 1st index

al2.add(60); // 2nd index

al.addAll(al2);

System.***out***.println("copy arraylist is=" + al);

Iterator<Integer> itr = al.iterator();

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

System.***out***.println(itr.next());

}

}

}

//2. Program for design generic arraylist for Integer type only

**package** com.arraylist;

**import** java.util.ArrayList;

**public** **class** ArrayListDemo2 {

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

ArrayList<Integer> al= **new** ArrayList<Integer>();

al.add(10);

al.add(20);

al.add(30);

**for**(**int** i: al) {

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

}

}

}

1. Program for design the generic arraylist for String type only

**package** com.arraylist;

**import** java.util.ArrayList;

**public** **class** ArrayListDemo3 {

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

ArrayList<String> al= **new** ArrayList<String>();

al.add("10");

al.add("20");

al.add("30");

**for**(String str: al) {

System.***out***.println(""+str);

}

}

}

//4. Program for demonstrate the arraylist method

**package** com.arraylist;

**import** java.util.ArrayList;

**public** **class** ArrayListDemo4 {

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

ArrayList al= **new** ArrayList();

al.add(10);

al.add(20);

al.add(50);

al.add(2,75);

System.***out***.println("size of list is="+al.size());

System.***out***.println("List="+al);

System.***out***.println(al.contains(80));

}

}

//5. Program for sorting arraylist

**package** com.arraylist;

**import** java.util.ArrayList;

**import** java.util.Collections;

**public** **class** ArrayListDemo6 {

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

ArrayList<String> al= **new** ArrayList<String>();

al.add("shubham");

al.add("rahul");

al.add("laxman");

al.add("snehal");

al.add("kshitija");

al.add("yogesh");

al.add("piyush");

al.add("pushkar");

al.add("ajay");

Collections.*sort*(al);

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

}

}

//6. Program for merging two arraylist into one arraylist

**package** com.arraylist;

**import** java.util.ArrayList;

**public** **class** ArrayListDemo7 {

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

ArrayList<Integer> al=**new** ArrayList<Integer>();

al.add(10);

al.add(20);

al.add(30);

ArrayList<Integer> al1=**new** ArrayList<Integer>();

al1.add(40);

al1.add(50);

al1.add(60);

ArrayList<Integer> al2=**new** ArrayList<Integer>();

al2.addAll(al);

al2.addAll(al1);

System.***out***.println("Merge list element is>>"+al2);

}

}

//7. create for user the arraylist defined type for employee

**package** com.arraylist;

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

**public** **class** ArrayListDemo8 {

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

ArrayList<Employee> arrayList = **new** ArrayList<Employee>();

arrayList.add(**new** Employee(20, "ram", "25000"));

arrayList.add(**new** Employee(30, "sohan", "15000"));

//by using iterator

Iterator<Employee> itr = arrayList.iterator();

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

System.***out***.println("employee list>>" + itr.next());

}

//by using for each loop

**for**(Employee e1: arrayList) {

System.***out***.println("data is>>"+e1);

}

}

}

**package** com.arraylist;

**public** **class** Employee {

// id, name, salary.

**int** id;

String name;

String salary;

**public** Employee(**int** id, String name, String salary) {

**super**();

**this**.id = id;

**this**.name = name;

**this**.salary = salary;

}

**public** **int** getId() {

**return** id;

}

**public** **void** setId(**int** id) {

**this**.id = id;

}

**public** String getName() {

**return** name;

}

**public** **void** setName(String name) {

**this**.name = name;

}

**public** String getSalary() {

**return** salary;

}

**public** **void** setSalary(String salary) {

**this**.salary = salary;

}

@Override

**public** String toString() {

**return** "Employee [id=" + id + ", name=" + name + ", salary=" + salary + "]";

}

}

//8. Design the method to return the list of Employees in arraylist.

**public** List<Employee> getEmployeeList() {

List<Employee> list = **new** ArrayList<Employee>();

list.add(**new** Employee("ajay", "deshmukh"));

list.add(**new** Employee("Ram", "Pawar"));

**return** list;

}

//9. Design the method to return arraylist to method

**package** com.arraylist;

**import** java.util.ArrayList;

**public** **class** EmployeeList {

**public** ArrayList getEmployeedata() {

ArrayList arrayList= **new** ArrayList();

arrayList.add(10);

arrayList.add(20);

arrayList.add(30);

**return** arrayList;

}

}

**package** com.arraylist;

**import** java.util.ArrayList;

/\*10. Program for how insert the elements into list for type string and integer and iterate

\* by using for each loop

\* \*/

**public** **class** ArrayListDemo4 {

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

ArrayList arrayList= **new** ArrayList();

arrayList.add(50);

arrayList.add(10);

arrayList.add("ram");

**for**(Object o: arrayList) {

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

}

}

}

11. Arraylist program for dynamic values

**public** **class** MobileNumber {

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

List<String> list = **new** ArrayList<String>();

**for** (**int** i = 1; i <= 5; i++) {

System.***out***.println("Enter the 5 mobile number>>");

Scanner scanner = **new** Scanner(System.***in***);

String mobileNumber = scanner.next();

list.add(mobileNumber);

}

Iterator<String> iterator = list.iterator();

**while** (iterator.hasNext()) {

System.***out***.println(iterator.next());

}

}

}