Collections:

Collection Objects:

* A collection object/container object is an object that stores group of other objects.
* A collection object stores only references of other objects.
* Collection object cannot store primitive data types, it stores only the object.

Collection Class:

A collection class/container class is a class whose object can store a group of other objects. These collection classes are available in java.util package.

Q. what is collection framework?

A: It is a class library to handle group of objects. It is implemented in java.util package.

Linked List:

A linked list represents a set of nodes such that each node contains 2 fields:

* Data field 🡪 stores data.
* Link field 🡪 stores reference to the next node.

🡪 These references are useful to traverse the list easily.

1. To create a linked list:

LinkedList ll = new LinkedList();

2. To add elements (objects) to Linked List:

ll.add(element);

To add element in 2nd position:

ll.add(2,element);

3. To remove the first element from the LinkedList:

ll.removeFirst();

To remove the last element from the LinkedList:

ll.removeLast();

To remove the 2nd element from the LinkedList:

ll.remove(2);

4. To change the ith element with new element.

ll.set(2, new\_element);

Ex. Program:

import java.util.\*;

import java.io.\*;

class LListDemo

{

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

{

//create an empty linked list

LinkedList ll = new LinkedList();

//add elements to LL

ll.add("INDIA");

ll.add("America");

ll.add("France");

ll.add("Britain");

ll.add("Italy");

//display the contents of LL

System.out.println("list:"+ll);

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

String element;

int pos, choice=0;

//menu

while(choice<4)

{

System.out.println("LL Operation");

System.out.println("1. insert element");

System.out.println("2. remove element");

System.out.println("3. change element");

System.out.println("4. exit");

System.out.println("enter your choice");

choice = Integer.parseInt(br.readLine());

switch(choice)

{

case 1:

System.out.println("enter element");

element = br.readLine();

System.out.println("enter position no");

pos = Integer.parseInt(br.readLine());

ll.add(pos,element);

break;

case 2:

System.out.println("enter position no");

pos = Integer.parseInt(br.readLine());

ll.remove(pos);

break;

case 3:

System.out.println("enter new element");

element = br.readLine();

System.out.println("enter pos number");

pos = Integer.parseInt(br.readLine());

ll.set(pos,element);

break;

default:

return;

}

System.out.println("List = "+ll);

}// end of while.

}

}