Linked Lists:

A linked list is a linear data structure in which each element is stored as an object in non contiguous memory location.

Each object stores two things, one is the data (value) and the second is the memory location of the next or previous addresses.

Multiple objects are linked together to act as a linear data structure.

ex: web pages, online examination.

1. single Linked List: Each object stores the data and the memory location of the next or previous object; hence in a single linked list traversal is only possible in single direction i.e., head to tail.

Example: linked list implementation in java.

```
import java.util.*;
class Main {
    public static void main (String args []){
        LinkedList <Integer> l1 = new
                                LinkedList <Integer> ();
        l1.add (1);
        l1.add (2);
        l1.add (3);
        l1. add (1,5);
        System.out.println(l1); // [1,5,2,3]
    //updating the element at index 3 to 100
        l1.set (3,100);
        S.O.P (l1); // [1, 5, 2, 100]
    //removing the element
        l1.remove(100);
    }
}
```

Itterating over linkedlist using get() method and for loop.

```
for (int i=0; i<l1.size(); i++){
        S.O.P( l1.get(i)+" ");
}
// Itterating over foreach loop
    for (int i: l1){
        S.O.P(l1);
    }
```