

Vector Class:

- Vector is available since jdk1.0V
- It allows duplicates & insertion order is maintained.
- Default capacity when creating an Vector is 10.
- Its capacity increases by (CurrentCapacity*2).
- It is synchronized by default.

```
Vector v=new Vector();
```

```
Vector v=new Vector(int capacity);
```

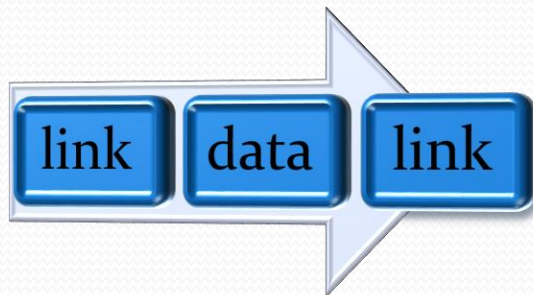
```
Vector v=new Vector(int capacity, int incrementalcapacity);
```

Vector Methods

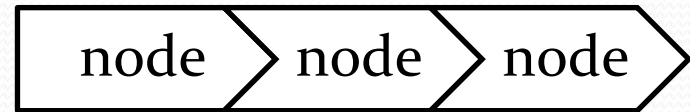
Method	Description
<code>addElement(Object o);</code>	Adds the specified component to the end of this vector, increasing its size by one.
<code>removeElement(Object o);</code>	Removes the first (lowest-indexed) occurrence of the argument from this vector.
<code>removeElementAt(int index);</code>	Deletes the component at the specified index.
<code>removeAllElements();</code>	Removes all components from this vector and sets its size to zero.
<code>Object elementAt(int index);</code>	Returns the component at the specified index.
<code>Object lastElement();</code>	Returns the last component of the vector.
<code>Object firstElement();</code>	Returns the first component (the item at index 0) of this vector.

LinkedList Class:

- LinkedList is available since jdk1.2V.
- It allows duplicates, null & insertion order is maintained.
- Default capacity when creating an LinkedList is 0.
- In linked list elements are stored in the form of nodes.
- Each node will have three fields, the data field contains **data** and the link fields contain references to previous and next nodes.
- It occupies more memory than ArrayList and Construction time is also high. **Syntax:** `LinkedList ll=new LinkedList();`



Node Structure



Linked List

LinkedList Methods

Methods	Description
Object getFirst();	Returns the first element in this list
Object getLast();	Returns the last element in this list
Object removeFirst();	Removes and returns the first element from this list
Object removeLast();	Removes and returns the last element from this list.
void addFirst(Element e);	Inserts the specified element at the beginning of this list.
addLast(Element e);	Appends the specified element to the end of this list.