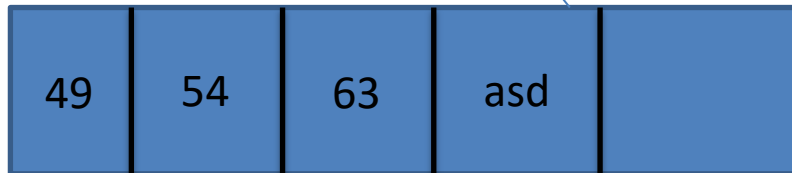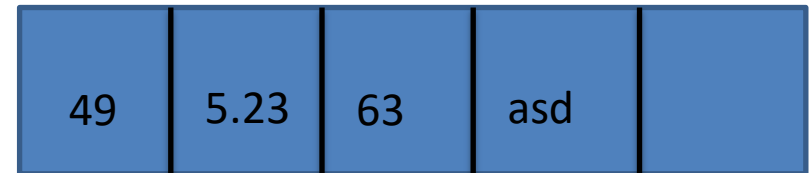# Vector in Java

9/6/2020

Vector

Vector is a class create array type memory block and allow to store any object(any types of values).vector class use util package and provide various function to create or manipulate vector onbject.

Int   arr[]=new int(5);

Vector v=new Vector(5);

49	54	63	asd	

49	5.23	63	asd	

- How to create Vector:

Syntax:

     1)   Vector <object>=new Vector(size);

     2)   Vector <object>=new Vector();

     3)   Vector <object>=new Vector(values);

Eg:

Vector v;

v=new Vector();

v

Vector Functions

1) **add** → Inserts the specified element at the specified position in this Vector. add function also use for insert collection or object.

    Syntax:

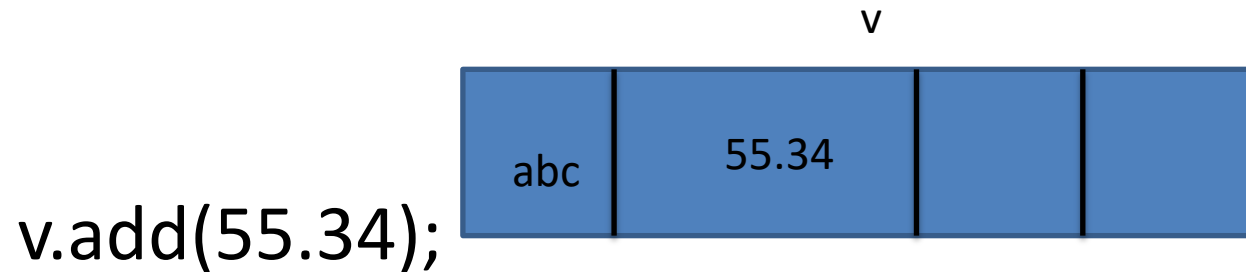   \<object\>.add(index,\<value\>);

    Eg:

                v.add(2,"abc");

    Note:

- add function use index position less than or equal vector size.

Eg:

Vector v=new Vector(5);

v.add("abc");

v

abc	55.34		

v.add(55.34);

Note:

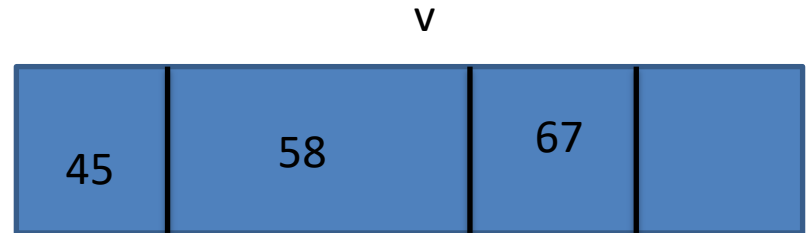- In java add function can be append value at end .

- addAll → This function is use to add multiple elements at end or also insert from given position.

  syntax:

  1. <object>.addAll(index,<collection>); //insert at specify position.

  2. <object>.addAll(collection); //append

Eg:

int arr[]=new int(3);

arr[0]=45;

arr[1]=58;

arr[2]=67;

v.addAll(arr);

v

45	58	67	

- removeAllElements → Delete all vector Elements from specified vector.

syntax:

                                                                                      `<object>.removeAllElements();`

      Eg:

                                                       `v.removeAllElements();`

- clear → Delete all vector Elements from specified vector.

syntax:

                                            `<object>.clear();`

      Eg:

                                            `v.clear();`

- Note:

                Clear only erase vector elements.

q) Write a java code to create user define size vector and store some values till user wants or vector is not full and display vector elements?

- elementAt→ This function is use to returns the component at the specified index from vector.

    Syntax:

            `<variable>=<object>.elementAt(index);`

    Eg:

            `x=v.elementAt(1);`
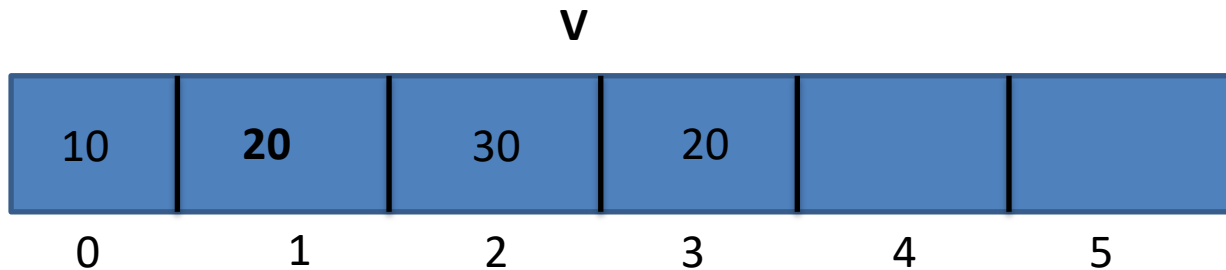
            "abc"

List of more vector function

- copyINTO
- IndexOf
- firstElement
- lastElement
- **get**
- **insertElementAt**
- **isEmpty**
- **lastIndexOf**
- **Remove**
- **size**

indexOf

- This function is use to return index for specified object from vector.If Object not found return -1.

v

10	**20**	30	20		
0	1	2	3	4	5

- Eg:

Int i;

i=v.indexOf(20);

        1 (First searching occurrences)

i=v.indexOf(20,i+1);

        3

Syntax:

1. \<variable>=\<object>.indexOf(\<searching object>); ← Default start from zero index

2. \<variable>=\<object>.indexOf(\<searching object>,start index);

InsertElementAt → This Function is use to insert given Element at specified position in vector. In vector elements automatically sift for insertion.

      syntax:

            \<object>.insertElementAt(\<index>,\<value>);

      Eg:

            v.insertElementAt(2,25);

Q) Write a menu driven code to create, insert, delete, input and display vector elements?

Size→ This function is use to return size of vector or number of elements of vector.

    syantax:

        \<variable\>=\<object\>.size();

    Eg:
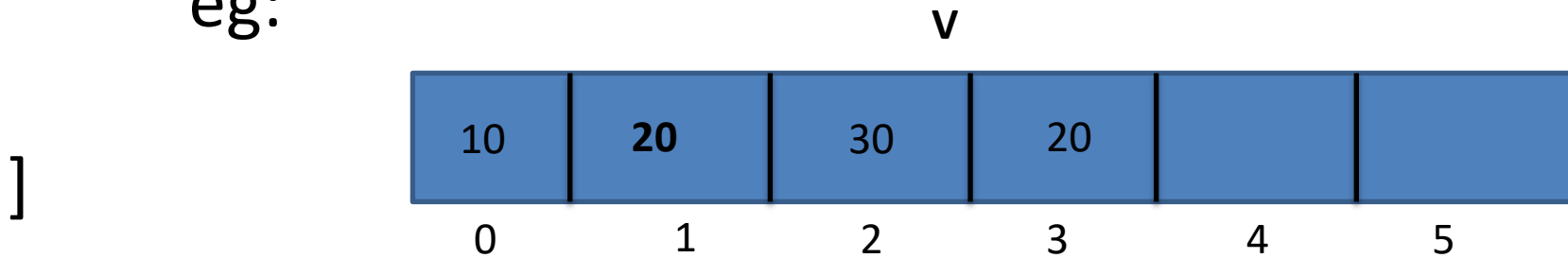
        len=v.size();

find

- This function is use to find elements from vector. If element not found return -1 otherwise return 1.

    syntax:

    <variable>=<object>.find(value);

    eg:

v

]

10	**20**	30	20		
0	1	2	3	4	5

x=v.find(20); → 1

x=v.find(70); → -1

isEmpty

- This function is use to check given vector in empty or not, and return 0(false) and 1(true) value.

Syntax:

                <variable>=<object>.isEmpty();

Eg:

                x=v.isEmpty();

                        or

             if(v.isEmpty())

                    statement;