DAY-54

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VECTOR (C)

WHAT IS VECTOR ?

- IT IS LEGACY CLASS
- IT IS AN IMPLEMENTATION CLASS OF LIST(I)
- IT IS HETROGENOUS
- IT ALLOWS DUPLICATE OBJECTS
- IT PRESERVES INSERTION ORDER
- **NULL** INSERTION IS POSSIBLE
- IT IMPLEMENTS SERIALIZABLE (I) , CLONABLE (I) AND RANDOM ACCESS (I)
- IT IS THREAD SAFE (ARRAYLIST IS NOT THREAD SAFE).
- PERFORMANCE IS SLOWER COMPARED TO ARRAYLIST.
    - DEFAULT CAPACITY = 10
    - NEW CAPACITY = CURRENT CAPACITY * 2

VECTOR SPECIFIC METHODS

1. addElement(Object obj) // to add an object
2. removeElement(Object obj) // to remove an object
3. removeElementAt(int index) //to remove object from an index
4. removeAllElements(); //removes all elements
5. elementAt(int index) // to retrieve object from an index
6. firstElement(); // to retrieve the first object
7. lastElement(); //to retrieve last object
8. capacity();
9. elements();

CONSTRUCTORS

1. VECTORS V = NEW VECTOR();
2. VECTOR V = NEW VECTOR(INT INTIAL CAPACITY);
3. VECTOR V = NEW VECTOR(COLLECTION C)

```
package collectionpractice;

import java.util.Vector;

public class vect {

	public static void main(String[] args)
	{
		Vector v = new Vector();
		System.out.println(v.capacity());
```

```
                System.out.println(v.size());
                v.addElement(1);
                v.addElement(2);
                v.addElement("java");
                v.addElement(null);
                v.addElement(1);

                System.out.println("vector "+v);
                v.removeElement(1);
                System.out.println("vector v after removing 1 "+v);
                v.removeElementAt(0);
                System.out.println("after removing index 0"+v);
                System.out.println(v.elementAt(1));
                System.out.println(v.firstElement());
                System.out.println(v.lastElement());
                v.removeAllElements();
                System.out.println(v);

        }

    }
```

STACK

WHAT IS STACK ?

- IT IS A CHILD CLASS OF VECTOR
- IT IS ALSO A LEGACY CLASS
- IT IS IMPLEMENTED ON LAST IN FIRST OUT STRUCTURE

STACK AS ONLY ONE CONSTRUCTOR

STACK S = NEW STACK();

STACKS SPECIFIC METHODS

- PUSH(); //TO ADD NEW OBJECT
- POP(); //REMOVES AND RETURNS OBJECT AT TOP OF THE STACK
- PEEK(); //RETURNS TOP OF STACK WITHOUT REMOVING
- INT SEARCH(); // SEARCHES FOR AN OBJECT AND RETURNS ITS OFFSET FROM TOP OF STACK

RETURNS (- 1) IF OBJECT NOT PRESENT.