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List.java

```
interface List{//open List interface


	//4 abstract methods,
	//adding object to Array
	void add(Object o, int index);
	//getting object from Array
	Object get(int index);
	//removing object from Array
	void remove(int index);
	//finding array's size
	int size();


}//close List interface
```

Array.java

```
public class Array implements List{//open array class implementing List interface


	//Object array instance variable
	public Object[] array;


	public Array(int size){//open overload constructor
		//creates new array of type object of given size
		this.array = new Object[size];
	}//close overload constructor
```

```
	public void add(Object O, int index){//open add method
		//sets the value of the array to object O at the given index
		this.array[index] = O;
	}//close add method

	public Object get(int index){//open get method
		//returns the value of the array at given index
		return this.array[index];
	}//close get method

	public void remove(int index){//open remove method
		//sets the value of the array at given index to null
		this.array[index] = null;
	}//close remove method

	public int size(){//open size method
		//returns the size of the array
		return this.array.length;
	}//close size method

}//close array class
```

ArrayTest.java

```
public class ArrayTest{//open arrayTest class
	public static void main(String[] args){//open main method
```

```
//create new array object of size 5.
Array array = new Array(5);

//call size method and print results
System.out.println("Array Size: "+array.size()+"\n");

System.out.println("Using add method to add 2,3,4,5,6 to array.");
//for loop to populate array with integer objects using add method
for(int i=0;i<5;i++){//open for loop
        array.add((i+2),i);
}//close for loop

System.out.println("\nUsing get method to print array values.");
//for loop to print values of array using get method
for(int j=0;j<5;j++){//open for loop
        System.out.println("Position "+j+": "+array.get(j));
}//close for loop

System.out.println("\nUsing remove method to remove array values.");
//for loop to reset array using remove method
for(int k=0;k<5;k++){//open for loop
        array.remove(k);
}//close for loop

System.out.println("\nUsing add method to add double Objects to array.");
//for loop to re-populate array with double objects
for(int x=0;x<5;x++){//open for loop
```

```
                array.add((x+0.5),x);
            }//close for loop

            System.out.println("\nUsing get method to print array values.");
            //for loop to print values of array using get method
            for(int y=0;y<5;y++){//open for loop
                System.out.println("Position "+y+": "+array.get(y));
            }//close for loop

        }//close main method
}//close arrayTest class
```

```
D:\Users\marti\Files\Programming\Java\OOP2\Assignment3>java ArrayTest
Array Size: 5

Using add method to add 2,3,4,5,6 to array.

Using get method to print array values.
Position 0: 2
Position 1: 3
Position 2: 4
Position 3: 5
Position 4: 6

Using remove method to remove array values.

Using add method to add double Objects to array.

Using get method to print array values.
Position 0: 0.5
Position 1: 1.5
Position 2: 2.5
Position 3: 3.5
Position 4: 4.5

D:\Users\marti\Files\Programming\Java\OOP2\Assignment3>
```