

Array vs ArrayList

is a fixed length of sequence of values of the same type

is a sequence of objects

Declaring an Array

```
int arr[] = new int[size]
```

Object type

same type

Number of Elements

```
(ArrayName).length()
```

Access Element

```
(ArrayName)[i]
```

Multidimensional Array

Declaring 2D Array

```
datatype[ ][ ] varName =  
new datatype [row] [col];
```

Declaring 3D Array

```
datatype[ ][ ][ ] varName =  
new datatype [row][col]  
[depth];
```

Copying Array

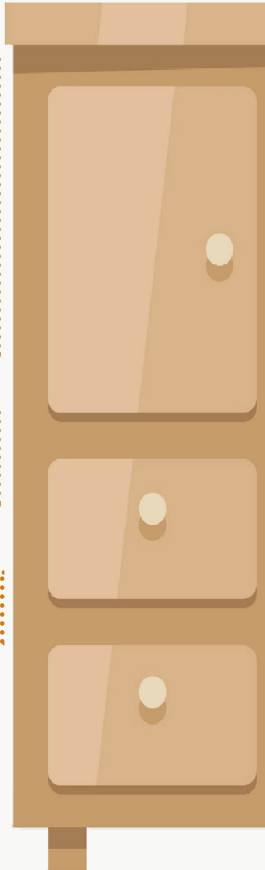
```
Arrays.copyOf  
(int[] original,int newLength)
```

Converting: Array to ArrayList

```
Array.asList(arrayName)
```



Like a cupboard, an Array is fixed size and consists of a sequence of values of the same type



Declaring an ArrayList

```
ArrayList<Type> arrL =  
new ArrayList<Type>();
```

Object type

could be different

Number of Elements

```
(ArrayListName).size()
```

Access Element

```
(ArrayListName).get(i)
```

Adding Element

```
(ArrayListName).add("penguin");
```

Removing Element

```
ArrayListName.remove(0)
```

Clearing an ArrayList

```
listName.clear();
```

Converting ArrayList to Array:

```
listname.toArray  
(arrayName);
```



Like boxes of kallax, ArrayList is a sequence of objects and isn't fixed-size, which means you can always add more stuff!

code example

```
public class Main {  
    public static void main(String args[]){  
        double[] array = {2.3, 25, 15, 100, 50.7};  
        double jumlah = 0;  
  
        for (int i = 0; i<array.length; i++){  
            jumlah = jumlah + array[i];  
        }  
        double rataRata = jumlah / array.length;  
        System.out.println("Nilai rata-rata = "+  
rataRata);  
    }  
}
```

code example

```
public class Cetak{  
    public static void main(String[] args){  
        ArrayList<Integer> a = new  
        ArrayList<Integer>();  
        a.add(9);  
        a.add(7);  
        a.add(8);  
        a.remove(9);  
        for( Integer b : a){  
            System.out.print(b); }  
    }  
}
```