ARRAYLIST

java.util.package

- The ArrayList class is in the java.util.package, so the following import statement is required

```
import java.util.ArrayList;
```

Syntax

```
ArrayList< DataType >  name = new ArrayList< DataType >();
```

MANDATORY

OPTIONAL

- DataType: CAN NOT BE PRIMITIVE!
  - ArrayList does not support primitives, ONLY supports non-primitives

Cybertek

Creating an ArrayList

```
ArrayList<String> nameList = new ArrayList<String>();
```

```
ArrayList<Integer> numberList = new ArrayList<Integer>();
```

```
ArrayList<Character> charList = new ArrayList<Character>();
```

```
ArrayList<Double> decimalList = new ArrayList<>();
```

ArrayList Methods

add()	get()	size()
set()	remove()	clear()
indexOf()	lastIndexOf()	contains()
equals ()	isEmpty()	containsAll()
addAll()	removeAll()	retainAll()

Differences between Arrays and ArrayList

- Array's size fixed, ArrayList' size is dynamic
- Array supports primitive and non-primitives, ArrayList does not support primitives
- Array does not have add or remove function, but ArrayList has
- Array can be multi-dimensional but ArrayList cannot be multi-dimensional

Summary

- ArrayList is a class in the Java that is similar to an array and allows you to store objects.
- Each object in arraylist, has its own index number
- Unlike an array, ArrayList does not support primitives
- Unlike an array, ArrayList' size is dynamic, it is automatically adjusted
- An ArrayList object automatically expands as items are added to it.
- In addition to adding items to an ArrayList, you can remove items as well.
- An ArrayList object automatically shrinks as items are removed from it.