

ArrayList Methods

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Java

Creating an ArrayList

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

This creates an empty ArrayList that can store Strings.

ArrayList Methods

- **Add(value)** - adds a value to the end of the ArrayList
- **Add(index, value)** - adds values at the given index
- **Get(index)** - accesses a value at a given index
- **Size()** - returns the size of the ArrayList
- **Remove(index)** - removes a value from the ArrayList at index
- **Set(index, value)** - sets the value at the given index

ArrayLists as Method Parameter

```
public void changeArrayList(ArrayList<String> arr){ }
```

Pass in the ArrayList just like an array,
make sure to define what type of ArrayList

Lab: ArrayList Methods

1. Make a **toStringArrayList** method
 - a. Print out ALL elements of your ArrayList
 - b. Parameter is an integer ArrayList
 - c. Returns nothing
2. Make a **getArrayListAverage** method
 - a. Gets the average of all integer elements in an ArrayList
 - b. Parameter is an integer ArrayList
 - c. Returns an integer that's the average

Lab: ArrayList Methods

3. Make a **getArrayListMax** method
 - a. Gets the maximum of all integers in the ArrayList
 - b. Parameter is an integer ArrayList
 - c. Returns an integer that is the maximum
4. Make a **getArrayListMin** method
 - a. Gets the minimum of all integers in the ArrayList
 - b. Parameter is an integer array
 - c. Returns an integer that is the minimum

Lab: ArrayList Methods

1. In main
 - a. Create an ArrayList
 - i. Have the user choose how many values
 - ii. Values range between 1 and 100
 - b. Call **toStringArray** on the ArrayList
 - c. Call **getArrayListMax** on the ArrayList
 - d. Call **getArrayListMin** on the ArrayList
 - e. Call **getArrayListAverage** on the ArrayList
2. Continuously ask the user for new size and re-call those methods on the newly sized ArrayList