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.

Wrapper Classes

ArrayLists must use **Wrapper Classes**!

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

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