ARRAYLIST CHEATSHEET

# IMPORTING THE LIBRARY

Before you can use an ArrayList, you must first import the necessary library.

Java Code:

import java.util.ArrayList

# Instantiating

## CREATING A GENERIC ARRAYLIST

Generic ArrayList is an ArrayList with a type; no other type is allowed to be inserted into the ArrayList.

Java Code:

ArrayList<type> listName = new ArrayList<type>();

Java Code:

ArrayList<String> myArrayList = new ArrayList<String>();

## CREATING NON-GENERIC ARRAYLIST

Java Code:

ArrayList listName = new ArrayList();

An example of this would be:

Java Code:

ArrayList myArrayList = new ArrayList();

Note

You do not need to build the ArrayList to any mentioned size, as it will automatically expand. This however is not recomended, as it will take many additional resources to accomplish this. Each time the ArrayList needs to expand, it creates a new ArrayList, and copies all of the contents to the new ArrayList, using the System.arrayCopy() method. As you can tell, this would eat up alot of additional resources.

## CREATING ARRAYLIST WITH A SIZE

Java Code:

ArrayList<type> listName = new ArrayList<type>(size);

ArrayList listName = new ArrayList(size);

Java Code:

ArrayList<String> myArrayList = new ArrayList<String>(50);

ArrayList myArrayList = new ArrayList(50);

# ARRAYLIST METHODS

## ADDING AN ITEM

Java Code:

listName.add(item);

An example of this would be:

Java Code:

myArrayList.add("penguin");

## Removing an Item

You can specify either the item, or the index number to remove an item from an ArrayList.

Java Code:

listName.remove(index);

listName.remove(item);

An example of this would be:

Java Code:

myArrayList.remove(0);

myArrayList.remove("penguin");

## Replacing an Item

You must specify the index and the new item that is going to replace the old item.

Java Code:

listName.set(index, item);

An example of this would be:

Java Code:

myArrayList.set(0, "tux");

## Checking the Size

Java Code:

listName.size();

An example of this would be:

Java Code:

int size = myArrayList.size();

## Searching ArrayList

This will only return the index of the first occurance of whatever it is you are searching for.

Java Code:

listName.indexOf(item);

An example of this would be:

Java Code:

int ix = myArrayList.indexOf("penguin");

## Verifying Contents

This will return a boolean true or false depending upon if the ArrayList does, or does not, contain what you are looking for.

Java Code:

listName.contains(item);

An example of this would be:

Java Code:

if( myArrayList.contains("penguin") )

## Checking if Empty

This will return a boolean true if the ArrayList is empty.

Java Code:

listName.isEmpty();

An example of this would be:

Java Code:

while( myArrayList.isEmpty() );

## Copying a Whole ArrayList

After creating a new ArrayList, you can copy the contents of an existing ArrayList to the new one.

Java Code:

newListName.addAll(listName);

An example of this would be:

Java Code:

ArrayList<String> copyArrayList = new ArrayList<String>();

copyArrayList.addAll(myArrayList);

## Clearing an ArrayList

You can clear the entire contents of an ArrayList.

Java Code:

listName.clear();

An example of this would be:

Java Code:

myArrayList.clear();

## Sorting an ArrayList

Java Code:

Collections.sort(listName);

An example of this would be:

Java Code:

Collections.sort(myArrayList);

## Outputing an ArrayList

Java Code:

for( <type> varName : listName )

System.out.println(varName);

An example of outputting a Generic ArrayList would be:

Java Code:

for( String ix : myArrayList )

System.out.println(ix);

An example of outputting a Non-Generic ArrayList would be:

Java Code:

for(Object ix : myArrayList )

System.out.println(ix);

# Conversion

There might be times when you will need to convert an ArrayList to an ordinary array, or converytan ordinary array to an ArrayList.

## ArrayList to an Array

Java Code:

listName.toArray(arrayName);

An example of this would be:

Java Code:

String[] regArray = new String[myArrayList.size()];

myArrayList.toArray(regArray);

## Array to an ArrayList

Java Code:

ArrayList listName = Array.asList(arrayName)

An example would be:

Java Code:

ArrayList<String> myArrayList = Arrays.asList(regArray);