HTML CSS MORE ▾ EXERCISES ▾

Java Iterator

❮ Previous Next ❯

Java Iterator

An `Iterator` is an object that can be used to loop through collections, like ArrayList and HashSet. It is called an "iterator" because "iterating" is the technical term for looping.

To use an Iterator, you must import it from the `java.util` package.

Getting an Iterator

The `iterator()` method can be used to get an `Iterator` for any collection:

Example

```
// Import the ArrayList class and the Iterator class
import java.util.ArrayList;
import java.util.Iterator;

public class Main {
  public static void main(String[] args) {

    // Make a collection
    ArrayList<String> cars = new ArrayList<String>();
    cars.add("Ford");
    cars.add("Mazda");

    // Get the iterator
    Iterator<String> it = cars.iterator();

    // Print the first item
    System.out.println(it.next());
  }
}
```

Try it Yourself »

Looping Through a Collection

To loop through a collection, use the `hasNext()` and `next()` methods of the `Iterator` :

Example

```
while(it.hasNext()) {
  System.out.println(it.next());
}
```

Try it Yourself »

Removing Items from a Collection

Iterators are designed to easily change the collections that they loop through. The `remove()` method can remove items from a collection while looping.

Example

Use an iterator to remove numbers less than 10 from a collection:

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

public class Main {
  public static void main(String[] args) {
    ArrayList<Integer> numbers = new ArrayList<Integer>();
    numbers.add(12);
    numbers.add(8);
    numbers.add(2);
    numbers.add(23);
    Iterator<Integer> it = numbers.iterator();
    while(it.hasNext()) {
      Integer i = it.next();
      if(i < 10) {
        it.remove();
      }
    }
    System.out.println(numbers);
  }
}
```

Try it Yourself »

Note: Trying to remove items using a **for loop** or a **for-each loop** would not work correctly because the collection is changing size at the same time that the code is trying to loop.

❮ Previous Next ❯