

## Iterator

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public interface Iterator {
    public Object getNext();
    public boolean hasNext();
}
public interface IterableCollection {
    public Iterator createIterator();
}
import java.util.ArrayList;
public class Collection implements IterableCollection {
    public ArrayList<Object> collection = new ArrayList<>();
    public void addToCollection(Object obj) {
        collection.add(obj);
    }
    public int size() {
        return collection.size();
    }
    public Object getFromCollection(int i) {
        return collection.get(i);
    }
    @Override
    public Iterator createIterator() {
        return new ConcreteIterator(this);
    }
}
public class ConcreteIterator implements Iterator {
    int i;
    Collection collection;
    public ConcreteIterator(Collection collection) {
        this.collection = collection;
    }
    @Override
    public Object getNext() {
        if(hasNext()) {
            return collection.getFromCollection(i++);
        }
        return null;
    }
    @Override
    public boolean hasNext() {
        return i < collection.size();
    }
}
public class Main {
    public static void main(String[] args) {
        new Main().go();
    }
    void go() {
        Collection collection = new Collection();
        collection.addToCollection("Noumekpo");
        collection.addToCollection("Germain");
        collection.addToCollection(22);
        for(Iterator iter = collection.createIterator(); iter.hasNext();) {
            Object obj = iter.getNext();
            System.out.println("[Collection Element]: " + obj);
        }
    }
}
```