Vector Example

```
public class Student implements Comparable{
   private String lastName;
   private String firstName;
   public Student(String firstName, String lastName) {
      this.firstName = firstName;
      this.lastName = lastName;
   }
   public String toString() {
      return firstName+" "+lastName;
   }
   // Compare method to be placed here
}
```

Compare method

```
public int compareTo(Object student) {
   int result =lastName.compareTo
        (((Student) student).lastName);
   return result == 0 ?  firstName.compareTo
          (((Student)student).firstName) :  result;
}
```

Vector example

```
import java.util.*;
import Student;
public class BathMates {
   private Vector aBatch;
   public BatchMates() { aBatch = new Vector();}
   public BatchMates(int numStudents) {
      batch = new Vector(numStudents);
   }
   // Adding students to batch
   public boolean add(Student newStudent) {
      return aBatch.add(newStudent);
   }
   //Accessor methods to be plugged-in here }
```

Vector example

```
// Accessor methods
public void sortB() {
  Collections.sort(aBatch);
}
public Student get(int index) {
  return (Student)aBatch.get(index);
}
public int size() {
  return aBatch.size();
}
public Iterator iterator() {
  return aBatch.iterator();
}
```

Using Iterator

```
<import statements>
public class VecTest {
   public static void main(String[] args) {
      Student aStudent;
      BatchMates newBatch = new BatchMates();
      for (;;) { aStudent=readStudent();
         if (aStudent==null) break;
         newBatch.add(aStudent);
      }
      // Rest of the Main
   }
   // Rest of Vector Program
}
```

Using Iterator

```
int count = newBatch.size();
System.out.println("Added "+count+ (count==1 ?  "student ":
                " students")+ " to the batch");

newBatch.sortB();

Iterator thisBatch = newBatch.iterator();

while (thisbatch.hasNext())
   System.out.println(thisBatch.next());
//end of main
}
```

Using Iterator

```
static public Student readStudent() {
    FormattedInput in = new FormattedInput();
    System.out.println("Enter first name"+ "or !  to end");
    String firstName = in.stringRead().trim();
    if (firstName.charAt(0) == '!')  return null;
    System.out.println ("Enter last name:  ");
    String lastName = in.stringRead().trim();
    return new Student(firstName,lastName);
  }
  //end of Vector Program
}
```