**package** chap20\_520;

**public** **class** Employee {

**private** String name;

**private** **int** age;

**private** **double** salary;

**public** Employee(String name, **int** age, **double** salary) {

**super**();

**this**.name = name;

**this**.age = age;

**this**.salary = salary;

}

**public** **int** getAge() {

**return** age;

}

**public** **double** getSalary() {

**return** salary;

}

**public** String getName() {

**return** name;

}

@Override

**public** String toString() {

**return** "Employee name=" + name + ", age=" + age + ", salary=" + salary;

}

}

**public** **class** EmpListings {

**public** **static** **void** main(String[] args) {

LinkedList<Employee> staff = **new** LinkedList<>();

staff.add(**new** Employee("Otto Mattik",28,95000));

staff.add(**new** Employee("Mary Knate",26,105000));

staff.add(**new** Employee("Sally Forth",32,80000));

Employee clerk = **new** Employee("Sarah Desert",45,50000);

Employee security = **new** Employee("Gus Tovwind",36,30000);

staff.addFirst(clerk);

staff.addLast(security);

ListIterator<Employee> liter = staff.listIterator();

System.***out***.println("First forward...");

**while**(liter.hasNext()) {

System.***out***.println(liter.next());

}

System.***out***.println("Now backwards...");

**while**(liter.hasPrevious()) {

System.***out***.println(liter.previous());

}

System.***out***.println("Now as an ArrayList...");

ArrayList<Employee> emps = **new** ArrayList<>(staff);

**for**(Employee e : emps) {

System.***out***.println(e);

}

System.***out***.println("Staff Sorted by age...");

Collections.*sort*(staff,**new** EmpAgeComparator());

**while**(liter.hasNext()) {

System.***out***.println(liter.next());

}

Employee youngest = Collections.*min*(emps,**new** EmpAgeComparator());

System.***out***.println("Youngest employee is " + youngest.getName());

List<Employee> nonUnion = Arrays.*asList*(clerk,security);

System.***out***.println(nonUnion);

System.***out***.println("Using a vector...");

Vector<Employee> victor = **new** Vector<Employee>(staff);

System.***out***.println("Staff size is " + victor.size());

**for**(**int** i = 0; i < victor.size(); i++) {

System.***out***.println(victor.get(i));

}

}

}

**package** chap20\_520;

**import** java.util.Comparator;

**public** **class** EmpAgeComparator **implements** Comparator<Employee> {

@Override

**public** **int** compare(Employee arg0, Employee arg1) {

**if**(arg0.getAge() > arg1.getAge()) {

**return** 1;

}

**else** **if**(arg0.getAge() < arg1.getAge()) {

**return** -1;

}

**return** 0;

}

}

**public** **class** QueueTest {

**public** **static** **void** main(String[] args) {

Queue<Employee> lineup = **new** LinkedList<>();

lineup.offer(**new** Employee("Denny",23,40000));

lineup.offer(**new** Employee("Jenny",30,65000));

lineup.offer(**new** Employee("Kenny",33,90000));

lineup.offer(**new** Employee("Benny",31,85000));

System.***out***.println(lineup.poll()); // who's next please? It's Denny

System.***out***.println(lineup.peek()); // Jenny satys in the queue

System.***out***.println(lineup.size());

**while**(!lineup.isEmpty()) {

System.***out***.println(lineup.poll());

}

System.***out***.println(lineup.size());

}

}