

HW1

1. People's weights (array: 10 pts)

Problem Description:

- (1) Prompt the user to enter five numbers, being five people's weights. Store the numbers in an array of doubles. Output the array's numbers on one line, each number followed by one space. (3 pts)
- (2) Also output the total weight, by summing the array's elements. (2 pt)
- (3) Also output the average of the array's elements. (2 pt)
- (4) Also output the max array element. (3 pts)

Ex:

```
Enter weight 1:
236.0
Enter weight 2:
89.5
Enter weight 3:
142.0
Enter weight 4:
166.3
Enter weight 5:
93.0
You entered: 236.0 89.5 142.0 166.3 93.0

Total weight: 726.8
Average weight: 145.35999999999999
Max weight: 236.0
```

Coding: (Copy and Paste Source Code here.)

Testing: (Paste the screenshot of your result here. And describe how you test this program)

2. Ticketing service (Queue: 10 pts)

Problem Description:

Given main(), complete the program to add people to a queue. The program should read in a list of people's names including "You" (ending with -1), adding each person to the **peopleInQueue** queue. Then, remove each person from the queue until "You" is at the head of the queue. Include print statements as shown in the example below.

Ex: If the input is:

```
Zadie Smith  
Tom Sawyer  
You  
Louisa Alcott  
-1
```

The output is:

```
Welcome to the ticketing service...  
You are number 3 in the queue.  
Zadie Smith has purchased a ticket.  
You are now number 2  
Tom Sawyer has purchased a ticket.  
You are now number 1  
You can now purchase your ticket!
```

Here's a default template:

```
import java.util.Scanner;
import java.util.LinkedList;
import java.util.Queue;

public class TicketingService {

    public static void main (String[] args) {
        Scanner scnr = new Scanner(System.in);
        String personName = "";
        int counter = 0;
        int youPosition;

        Queue<String> peopleInQueue = new LinkedList<String>();

        personName = scnr.nextLine();
        while (!personName.equals("-1")) {
            // TODO: Add personName to peopleInQueue and
            //      determine position of "You" (youPosition)

            personName = scnr.nextLine();
        }

        System.out.println("Welcome to the ticketing service... ");
        System.out.println("You are number " + youPosition + " in the queue.");

        // TODO: In a loop, remove head person from peopleInQueue,
        //      output their name and that they have purchased a ticket,
        //      then output your position in the queue. When you are at
        //      the head, output that you can purchase your ticket.

    }
}
```

Coding: (Copy and Paste Source Code here.)

Testing: (Paste the screenshot of your result here. And describe how you test this program)