Last name First name	
class	CS3100
Assignment name/number	hwk1
Date submitted	“2014/02/17
Cs-login	
Other members of group or say none	
Number of hours programming since the beginning of semester	

All your hwks will have the above header

This is type T2 hwks. Read on my website how to submit hwks. Ask me if something is not clear. Read this document carefully twice from start to end before doing any programming. All progs in this course use OOP. (see help1500, help2500).

For all hwk:
You must have all the classes, attributes, and methods I ask for. But, you can make additional attributes and methods if you feel you need them.
If I give you name of a class, signature of a method, or name of a variable, you must use the name exactly. Signature of method means it's name and type of any arguments.
If I let you select the arguments for your method, I will say doFunction(…). You can then pick any arguments you want or have no arguments if you choose so.
Similarly for return type, sometimes I will specify, sometimes I will let you choose.

In this course we may sometimes specify packages. If I don't specify package you use no package. (That is called in Java using default package.)

You will be graded on following the given requirements, technical elegance of your solution, satisfaction of requirements, program style and correctness.

Read the programs on the page below and write some of those programs by yourself.
http://www.cs.csustan.edu/~rrsilver/html/help1500.html

This page contains link to program programmerProgramStyle2500.java that does not do much but shows the program style we will be using in this course.
http://www.cs.csustan.edu/~rrsilver/html/help2500.html

Any questions … ask in the class if you think it may benefit others, if it is specific to you – you can use the email or my office hours.
Hint: Start early. Use 7SP process from JavaCorner.

Q1:
Write program called Adder.
It reads input from user, an integer.
Then it will add all numbers from 1 up to and including the user specified number.
If user specifies 3, the program will add 1 + 2 + 3.

Q2:
Write program Bus.

This program will emulate the operation of school bus. We will have a bus that kids can get on and off and we want to know who is on it. This is a one-seat wide bus, and has 10 seats. We can emulate this by 1-d array. All arrays in Java are numbered position: 0,1,2..., look in the book. Array position 3, means same as array index 3. Humans would call it fourth position.

1. In the top of the class (object scope) there will 1 dim array called names. (private String[] names) In each seat we can put a kid. All kids have distinct names, like joe, nancy, etc.
2. When kid gets on the bus she will be given the first available seat, so seats are filled 0, 1, 2, …, but if student departs the bus, the next student coming in, will be given the first available seat.
3. The driver can print the passengers. It will look like this: seat, name:
   0, nancy
   1, jeff
   2, bob
   4, anna //3, unused-- don't print

//continue

1. There will be method getOn(String name).
2. Method int findFirstEmpty() will find first empty seat. This is used by getOn to give kid a seat.
3. print() //print all occupied seat, name.

- BEFORE any printing, you will say what was the last activity.
- For example you will say. “After erica gets on, here are the kids.”

4. getOff(String name) //bus stops and kid leaves.
5. swap(String name1, String name2) //if some kid misbehaves the driver will make him swap seats.
6. In the main method submit with the following operations.
7. joe comes in and finds first empty seat.
8. jeff comes in and finds first empty seat.
9. erica comes in and finds first empty seat.
10. bob comes in and finds first empty seat.
11. print all //print message what you are printing "After loading kids"
12. swap jeff and bob
13. print all // print message what you are printing "After swapping jeff and bob"
14. bus stops, erica leaves.
15. bus stops, bob leaves.
16. Print all. //announce what you are printing "After bob left"
17. Bus stops, new kid (nancy) is standing on the corner wants to take a ride, so give her first available seat in the bus.
18. Print all in the above format. //announce what you are printing "after nancy came on"
19. Note: It is not you selecting first available set, it is the program that finds first empty seat.
20. Note: The program should be able to handle other sequences.

More hints:
First ask your book, notes, JavaCorner and it may answer your question. If all that fails, ask the instructor. Do not wait as I may give another hwk sooner than you expect.