Announcements: Lecture text available at website in pdf;
Due dates at course website, CourseWeek link.
Read text Ch 3, do embedded problems
Online survey – PLEASE do it (worth one OWL point..)
Second programming assignment due Saturday night. Hand in through OWL;
Website: http://twiki-edlab.cs.umass.edu/bin/view/CS121Fall2010/WebHome

Lecture Synopsis–Talked last week mainly about the coordination between class definitions, and
constructor and method invocations in driver class;

Issues to review: how data is tagged; class attributes; flow of control at the statement level; flow of control
at the class level; How attributes get their values. Relationship between
class definitions and class objects.

Here is a TubTester driver class [note: gallon of water weighs 8.6 lbs]

```java
class TubTester{
    public static void main(String[] args){
        BathTub b = new BathTub("King",60);//60 gal capacity
        BathTub t = new BathTub("Queen",70);
        System.out.println(" capacity of both tubs: "+b.getCapacity()+t.getCapacity());
        System.out.println("filled wt of larger tub: "+t.totalWt());
    }
}
```

1. What outside class does it make use of?
2. What are that class’s attributes? Methods? Mutator methods?
3. Can you write the constructor?
4. Can you write the getCapacity() method (hint: steal from Car class, below)?

Here is the Car class – the questions at the end resemble what you need
to do for programming assignment 2.

```java
class Car{
    String make; // manufacturer
    double fuelCapacity;
    double fuelAmount;

    public Car(String what, double cap, double amt){
        make = what;
        fuelCapacity = cap;
        fuelAmount = amt;
    }

    public String getMake(){return make;)

    public double getCapacity(){return fuelCapacity;}

    public double getFuel(){ return fuelAmount;}

    public void setFuel(double amt){fuelAmount = amt;}
```
```java
public double unusedCap(){ // noteworthy: does a calculation
    return (fuelCapacity - fuelAmount); }
}

Now write a driver class that performs these actions

5. Make a car called myCar, a “Ford”, fuel capacity = 15.0, tank is half-filled.
6. Make a second car, called herCar, an “Audi”, cap = 16.0, amt = 12.0.
7. Write a statement that prints the unused fuel capacity of the Audi.
8. Write a statement that prints the sum of the capacities of the cars.
9. Steal exactly the right amount of gas from the Ford to fill the Audi.
10. Write a statement that copies into var fordGas the gas now in myCar.

11. Here is the beginning of a Mushroom class. Make an object in a driver called badOne, “Aminita”, wt is 1.5 oz, edible is false.

    public class Mushroom{
        private String name;
        private double weight;
        private Boolean edible;

        public Mushroom(String n, double w, boolean e){name = n; weight = w; edible = e;}
    }

12. Here is the beginning of a Duck class. Make an object in a driver called myDuck, name: “Dolly”, breed: “Mallard”.

    public class Duck{
        private String name;
        private String breed;

        public Duck(String n, String b){name = n; breed = b;}
    }
```