Announcements:
Ch 10 up in part today. Next program up today, due next friday. Current OWL assignment due tomorrow.
Captive Lab sessions: thur 230-5, fri 10-1230/LGRT 213

Inheritance -> the topic of the week
Here are two classes, Infant and WeightedInfant:

```java
public class Infant{
    private String name;
    private int age; // in months

    public Infant(String who, int months){
        name = who;
        age = months;
    }

    public String getName(){return name;}
    public int getAge(){return age;}
    public void anotherMonth(){age = age + 1;}
    public String toString(){return(name + " " + age);}
}

public class WeightedInfant extends Infant{
    private double weight;

    public WeightedInfant(String who, int months, double wt){
        super(who,months);
        weight = wt;
    }

    public double getWeight(){return weight;}
    public String toString(){return (super.toString() + " " + weight);}
}
```

Make a KidDriver class: 1) make a WeightedInfant object – jill/4 months/ 13.4 lbs
2) print her age; 3) print her weight; 4)make her one month older; 5) Print out all of her information

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Modeling:
1) make a Dog class (name, age); extend to a ShowDog class (yes or no?)
2) make a Tool class (name, weight); extend to a PowerTool class (amps)
3) make a Road class (start, finish, distance), include a toString method; extend to a MinorRoad class (is it paved, or not) also: add a toString method

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The Random class – where is it? Write a one class application that prints random ints between 0 and 9 in a column until their sum tops 100.

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Here’s the shuffle method from ch 9:

```java
public void shuffle(int[] nums){
    int swapPos, temp;
    for (int i = nums.length-1; i > 0; i--) {
        swapPos = nextInt(i+1); // pick pos from 0 -> i (i is possible)
        temp = nums[swapPos]; // swap vals at i, swapPos
        nums[swapPos] = nums[i];
        nums[i] = temp;
    }
}
```

How would you re-write it to shuffle an array of booleans? An array of chars?

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Extend Random to form a Coin class. Create a main that uses Coin to flip a coin 100 times, report number of heads that come up. Hint: write the main first!!

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Here’s a dice game: you have a pair of dice. The board is a straight line of 30 cells. There’s a single “piece”, which starts in the first cell (cell 0), and advances to the last cell. The advance amount equals your score on a throw of the dice. To win, you must land exactly on the last cell within 12 moves. If you land on cells 13, 17, or 19, you automatically lose. If a toss puts you off the board, you don’t move at all.

Do this experiment in a main in a GameDriver class: If you play this game 100 times, how many times do you win?