

Something new:  
Make a Class...

Mr. Neat  
Java

Wouldn't it be nice if?....

Car fred;

fred = new Car(x,y);

We need to make the class Car!

# Ta - Da, now we are going to make a Class!

- the class definition has three parts:
  - 1) fields (also called global variables or instance variables)
  - 2) constructors
  - 3) methods

# Constructors.....

In the file that **USES** the Car:

```
public class starter...  
{
```

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

```
        Car fred = new Car(17.0, 23.0);
```

these values have to get to the  
Car.java file!



# Constructors.....

In the file that **MAKES** the Car:

```
public class Car  
{  
    // fields up here
```

```
    public Car(double ex, double why)  
    {  
        // create Car parts here
```

the constructor  
definition



# Shows Both Files...

USES - starter.java

```
Car fred = new Car(17.0, 23.0);
```

---

MAKES - Car.java

no void!

same name as class  
& file

```
public Car(double x, double y)
{
}
}
```

“formal parameters”

# Constructors.....

In the file that **MAKES** the Car:

```
public class Car  
{
```

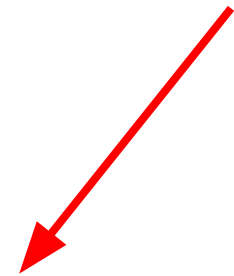
```
    private Rectangle upperBody;
```

```
    public Car(double ex, double why)  
    {
```

```
        upperBody = new Rectangle(ex, why,...);
```

```
        ...
```

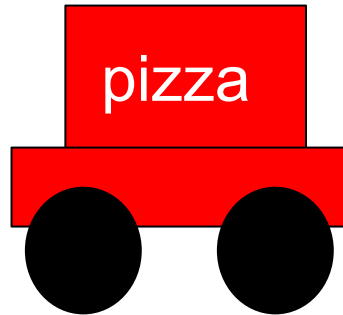
make the Car!



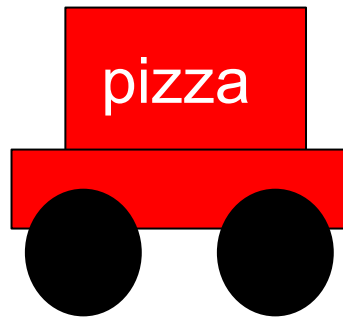
# Constructors.....

Want to add another constructor to allow:

```
Car fred = new Car(17.0, 23.0, "pizza");
```



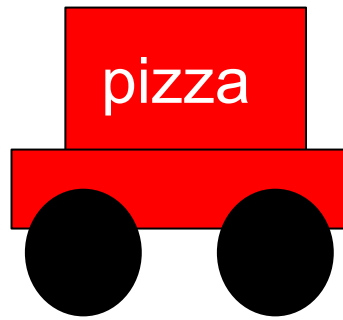




```
Car fred = new Car(17.0, 23.0, “pizza”);
```

To do this we are going to **reuse** the  
existing constructor

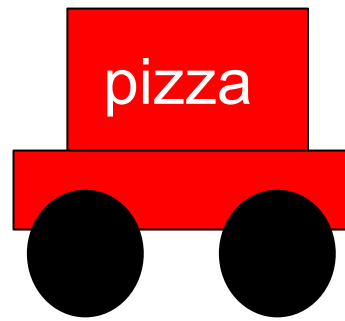
(any time you copy and paste code, there is  
a better way)



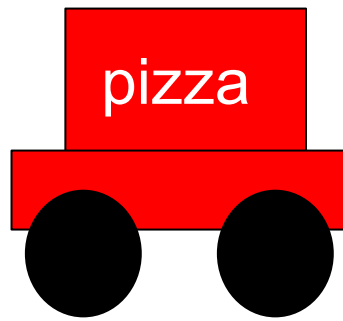
```
Car fred = new Car(17.0, 23.0, "pizza");
```

Need the keyword *this*

*this* provides a way to call another constructor in the same file. So if we wanted to call the existing constructor...



this(13, 25);



in starter.java

```
Car fred = new Car(17.0, 23.0, “pizza”);
```

in Car.java

```
public Car(double xx, double yy, String mess)
{
    this(xx,yy);
    // all the code to do the labels
}
```

# Lab

- Add a second constructor to your Car class that allows the user to place a label on the Car object
- test it by making a few Cars with different labels

# Hint

- Don't forget to initialize the new variables (the label variable(s)) in the first constructor.
- The original constructor did not know about the message Text variables cuz they didn't exist