

New Idea – Object Class

Mr. Neat
Java

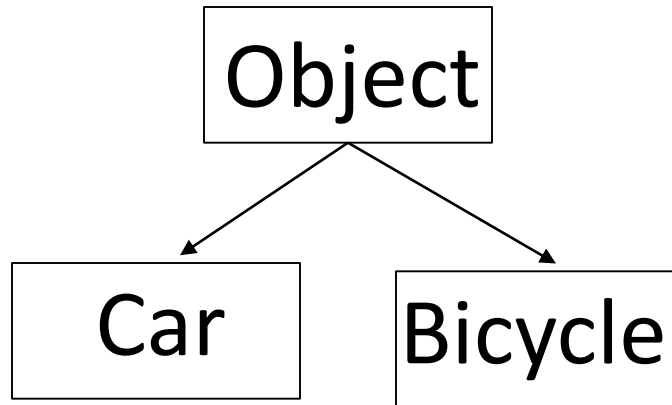
Big Idea in Java...

Inheritance

- Mechanism to make a group of different objects that have something in common
- Mechanism to make a more specialized class from a more general class (eg, Car with person in it)
- The Object class is the mother of all classes
- Family trees help to understand

Big Idea in Java...

Inheritance – Object class



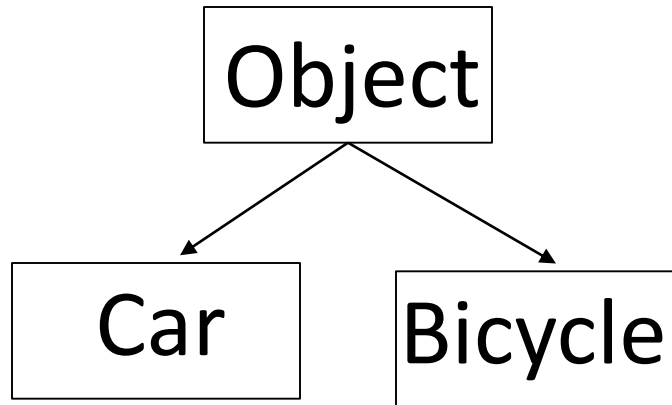
A Car “is-a” Object

A Bicycle “is-a” Object

Every class “is-a” Object

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Inheritance – Object class

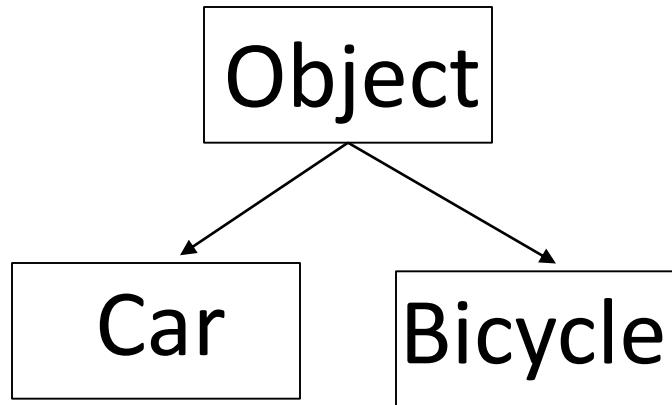


Can do this:

```
Object tom = new Car(43, 21,"joe",Color.RED,9);
```

Big Idea in Java...

Inheritance – Object class

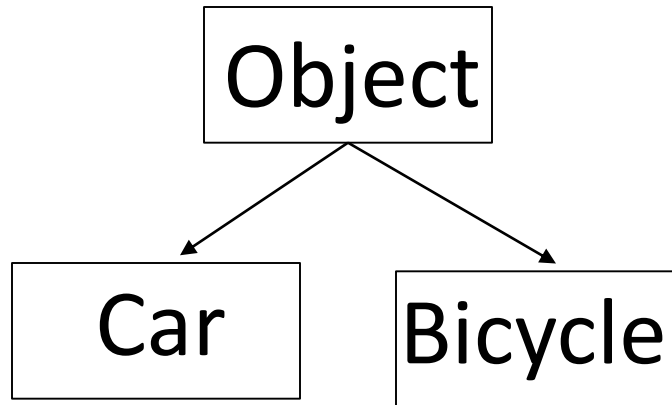


`Object tom = new Car(43, 21,"joe",Color.RED,9);`

Can put any class here

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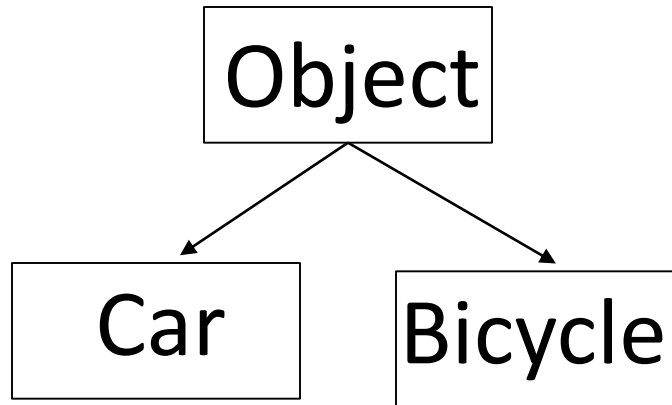


`Object tom = new Car(43, 21,"joe",Color.RED,9);`

Can put any class here. **HOWEVER**, can only use **Object methods on tom!**

Big Idea in Java...

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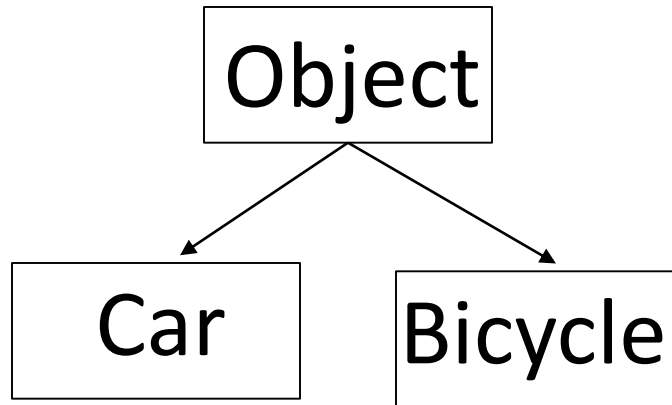


`Object tom = new Car(43, 21,"joe",Color.RED,9);`

There is only one Object method...toString()!!!

Big Idea in Java...

Inheritance – Object class



```
Object tom = new Car(43, 21,"joe",Color.RED,9);
```

```
System.out.println(tom.toString());
```


Lab

- Make 100 Bicycles & Cars (total)
- Try to recycle each Car and Bike
- Make each Car & Bike have:
 - Random colors
 - Random names
 - Random location
 - Random speeds

hints

- Make an array of 100 **Objects**
- Fill array with Cars and Bicycles
- Try to move them
- If you can't, try to do something to them