

New Idea – Abstract Class

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Java

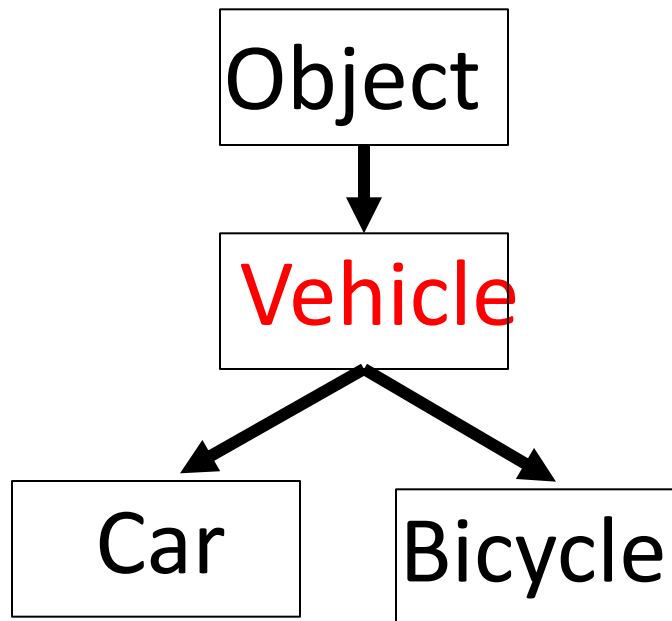
Big Idea in Java...

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

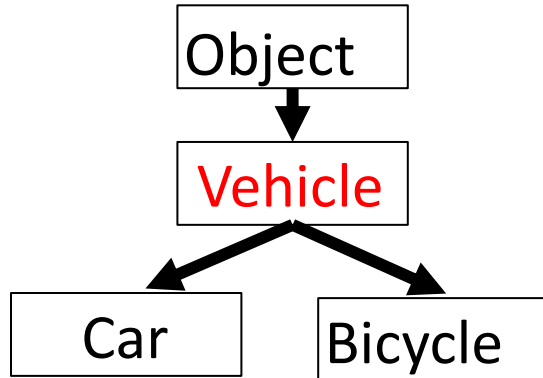
Big Idea in Java...

Inheritance – Abstract class



Big Idea in Java...

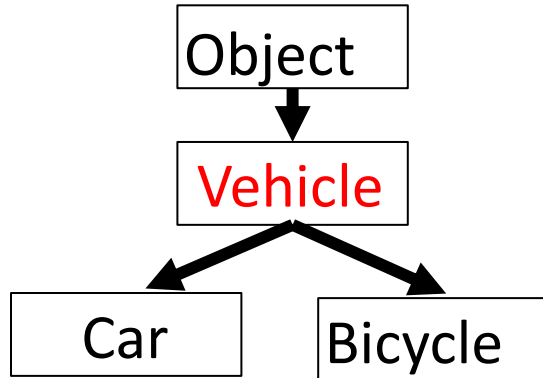
Inheritance – Abstract class



- Make a new file called Vehicle
- Add abstract methods (methods Vehicle will use)
- Extend Cars and Bicycles

Big Idea in Java...

Inheritance – Abstract class

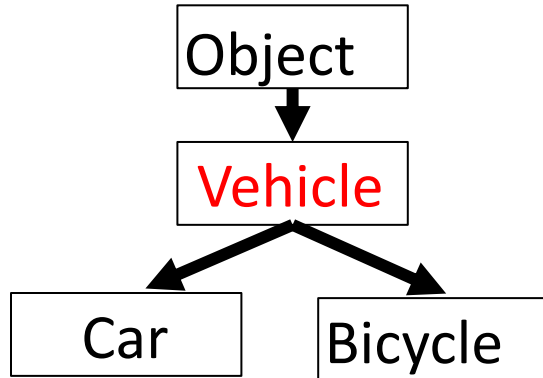


- Make a new file called **Vehicle**
- Add abstract methods (methods **Vehicle** will use)
- Extend **Cars** and **Bicycles**

```
public abstract class Vehicle  
{  
  
}
```

Big Idea in Java...

Inheritance – Abstract class



- Make a new file called Vehicle
- Add abstract methods (methods Vehicle will use)
- Extend Cars and Bicycles

```
public abstract class Vehicle
```

```
{
```

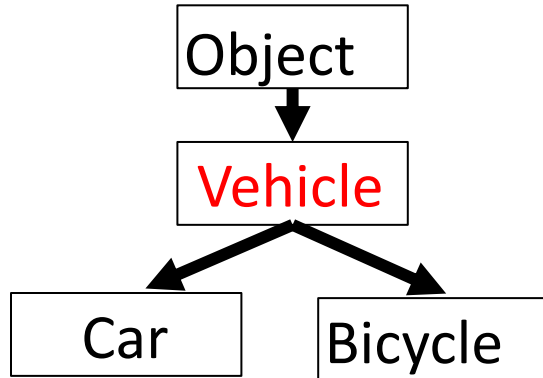
```
    public abstract void driveRandom();
```

```
    public abstract void draw();
```

```
}
```

Big Idea in Java...

Inheritance – Abstract class



- Make a new file called Vehicle
- Add abstract methods (methods Vehicle will use)
- Extend Cars and Bicycles

```
public class Bicycle extends Vehicle  
{
```

...

Lab

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

hints

- Make an array of 100 **Vehicles**
- Fill array with Cars and Bicycles
- Recycle them