1. Log in
2. Unit 4
   - Writing Methods
   - Recursion
   - Classes, Methods, and Objects

Mar 9-11:28 AM

Objects, Classes, and Methods Vocabulary ...

Types of Methods
Constructor Method
Default Constructor Method
Mutator Method
Accessor Method
Main Method

Types of Variables
Instance Variables
State Variables
Object Reference
Static Variable - today
Static Final Variable

Other Terms
Encapsulation
Instance of an Object
Public
Private
Recursion
Base Case in Recursion
Method Header
Access Specifiers-public/private/static
Return Types-int/double/String/boolean/void
Parameter

May 18-1:29 PM

Video

Understanding Objects

(6 minutes)

watch video

Nov 6-10:32 PM

Today We Make Puppy Objects

Nov 6-10:32 PM

Analyze Encapsulation & Parts ...

```
public class Puppy {

  public int age;
  public String breed, name;
  public static int puppyCount=0;

  public Puppy(String n, int a, String b) {
     name=n;
     age=a;
     breed=b;
     puppyCount++;
  }
  public String getName() {
     return this.name;
  }
  public void getAge(){
     System.out.println("The puppy is "+this.age);
  }
  public int getAge2() {
     return this.age;
  }
  public void changeName(String x) {
     this.name=x;
  }
  public int humanAge(int a){
     return a*7;
  }
```

May 19-10:59 AM

Analyze Encapsulation & Parts ...

Instance Variables

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public class Puppy {

  public int age;
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  }
  public String getName() {
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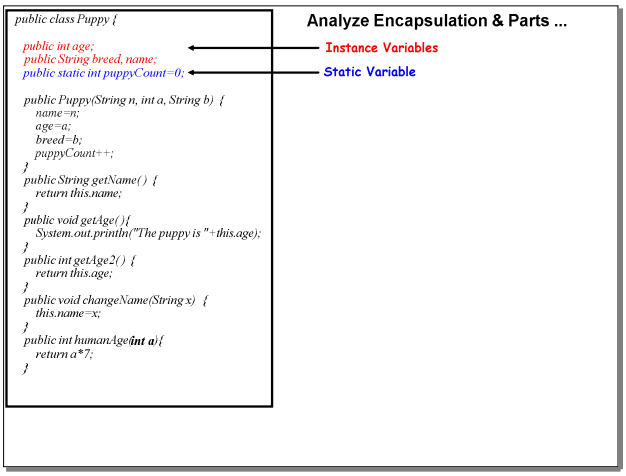
  public int humanAge(int a){
     return a*7;
  }
```

May 19-10:59 AM



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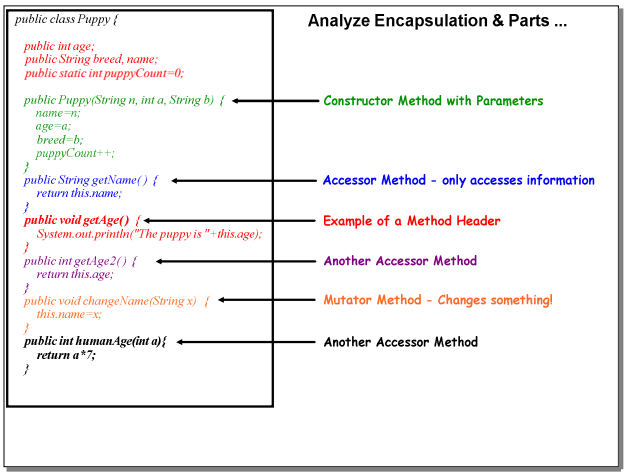

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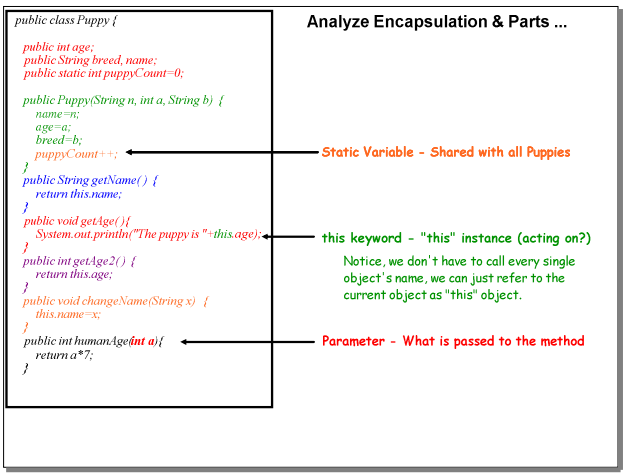

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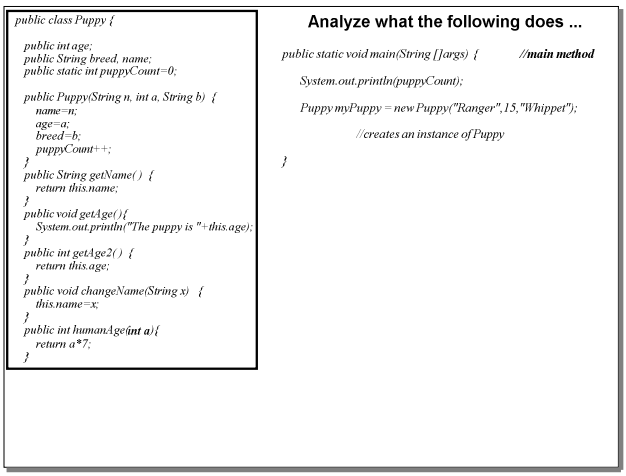

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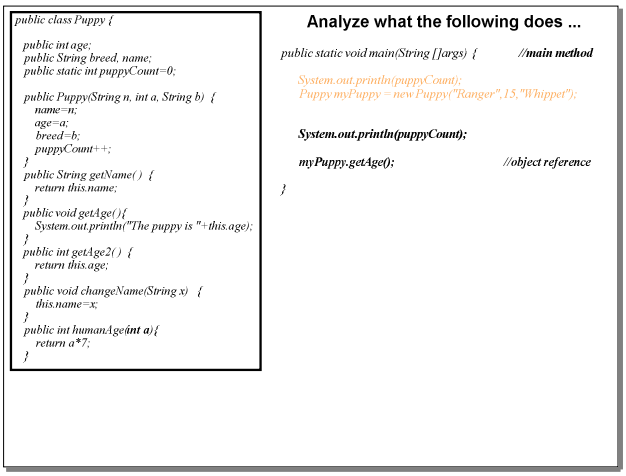

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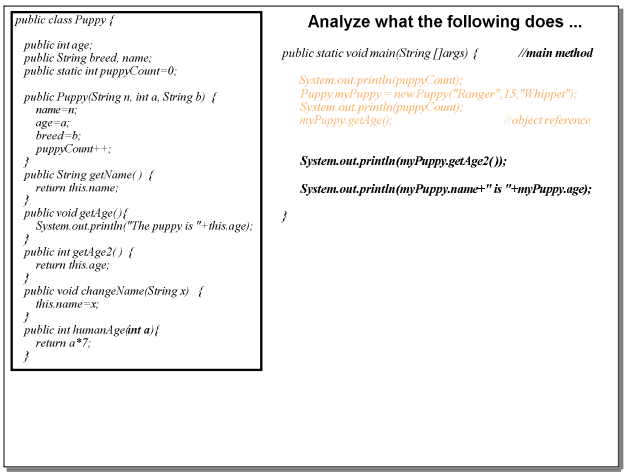

May 19-10:59 AM

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   }
   public int humanAge(int a){
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   }
```

Analyze what the following does ...

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

    System.out.println(puppyCount);
    Puppy myPuppy = new Puppy("Ranger",15,"Whippet");
    System.out.println(puppyCount);
    myPuppy.getAge();                             //object reference
    System.out.println(myPuppy.getAge2( ));
    System.out.println(myPuppy.name+" is "+myPuppy.age);


    Puppy pup2 = new Puppy("Rico",9,"Greyhound");

                //Create another instance of Puppy

    pup2.getAge();

}
```

May 19-10:59 AM

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    System.out.println(puppyCount);
    myPuppy.getAge();                             //object reference
    System.out.println(myPuppy.getAge2( ));
    System.out.println(myPuppy.name+" is "+myPuppy.age);
    Puppy pup2 = new Puppy("Rico",9,"Greyhound");
    pup2.getAge();


    System.out.println(pup2.getAge2());    //more object reference

    System.out.println(pup2.name+" is "+pup2.age);

    System.out.println(puppyCount);

}
```

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    System.out.println(puppyCount);
    myPuppy.getAge();                             //object reference
    System.out.println(myPuppy.getAge2( ));
    System.out.println(myPuppy.name+" is "+myPuppy.age);
    Puppy pup2 = new Puppy("Rico",9,"Greyhound");
    pup2.getAge();
    System.out.println(pup2.getAge2());    //more object reference
    System.out.println(pup2.name+" is "+pup2.age);
    System.out.println(puppyCount);


   //Want to change a puppy's name?

    myPuppy.name="Spot";

    System.out.println("myPuppy is now called "+myPuppy.getName());


}
```

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    System.out.println(puppyCount);
    myPuppy.getAge();                             //object reference
    System.out.println(myPuppy.getAge2( ));
    System.out.println(myPuppy.name+" is "+myPuppy.age);
    Puppy pup2 = new Puppy("Rico",9,"Greyhound");
    pup2.getAge();
    System.out.println(pup2.getAge2());    //more object reference
    System.out.println(pup2.name+" is "+pup2.age);
    System.out.println(puppyCount);
    myPuppy.name="Spot";
    System.out.println("myPuppy is now called "+myPuppy.getName());


    pup2.changeName("Gabby");

    System.out.println("pup2 is now called "+pup2.name);

    System.out.println(myPuppy.name+" is "+
          myPuppy.humanAge(myPuppy.getAge2())+
          " in human years!!!");
}
```

May 19-10:59 AM

Things to do ...

1. Do you have Unit 4 WS01-05 completed?
2. Be wrapping up Unit 04 WS06 - Classes & Objects 1
3. Work on Unit 04 WS07 - Creative Objects!

Nov 6-3:25 PM