From UML to Coding

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June 17, 2020

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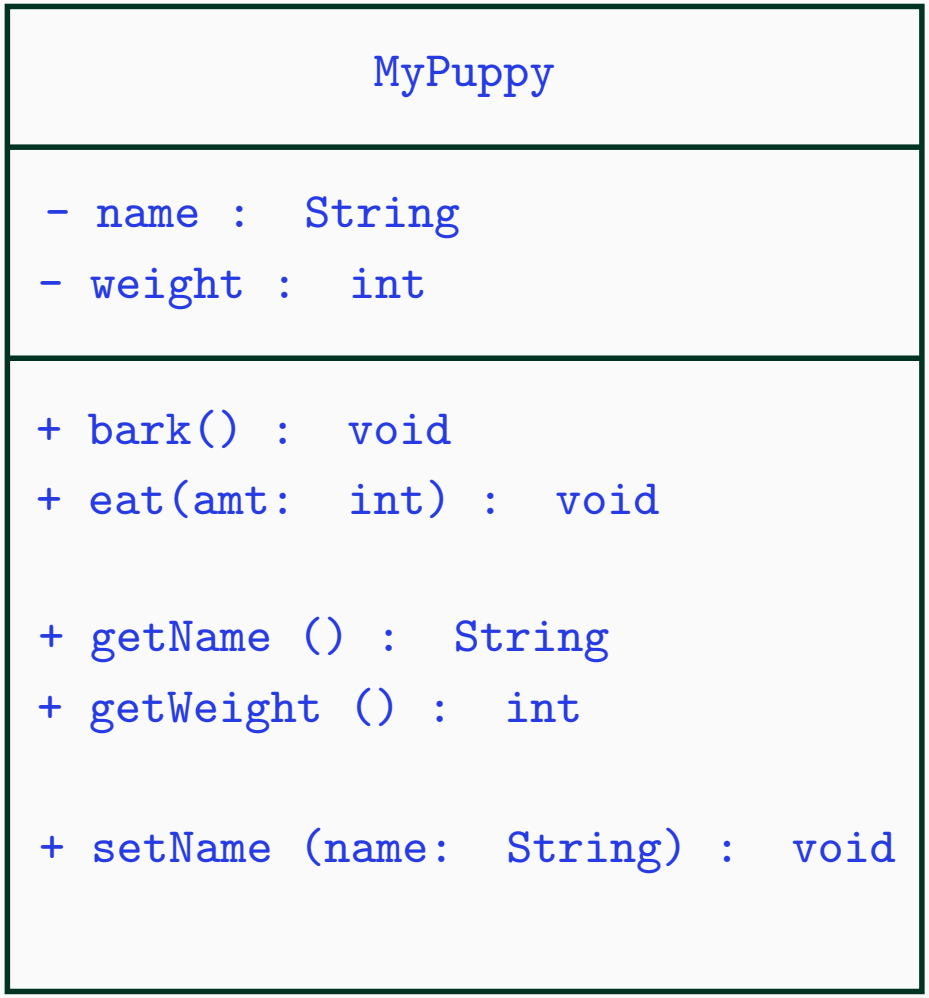
College of Computer Studies

MyPuppy class (no explicit constructor)



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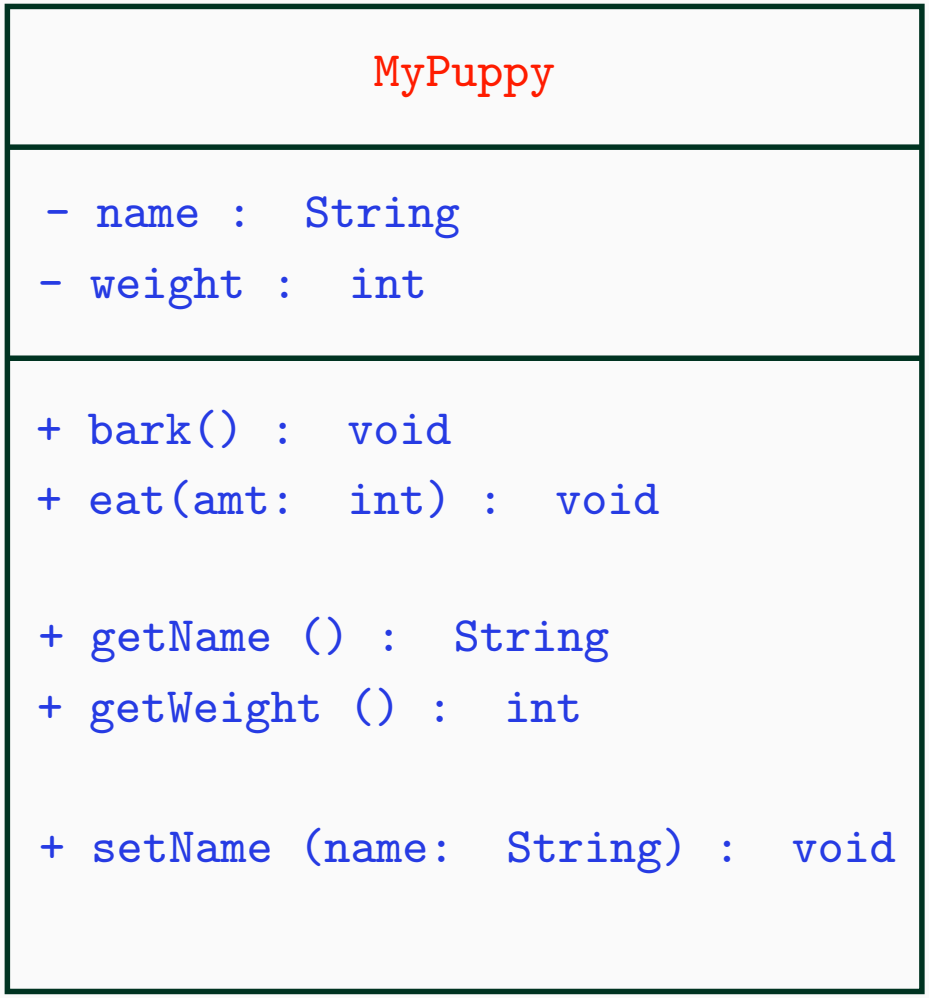


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}
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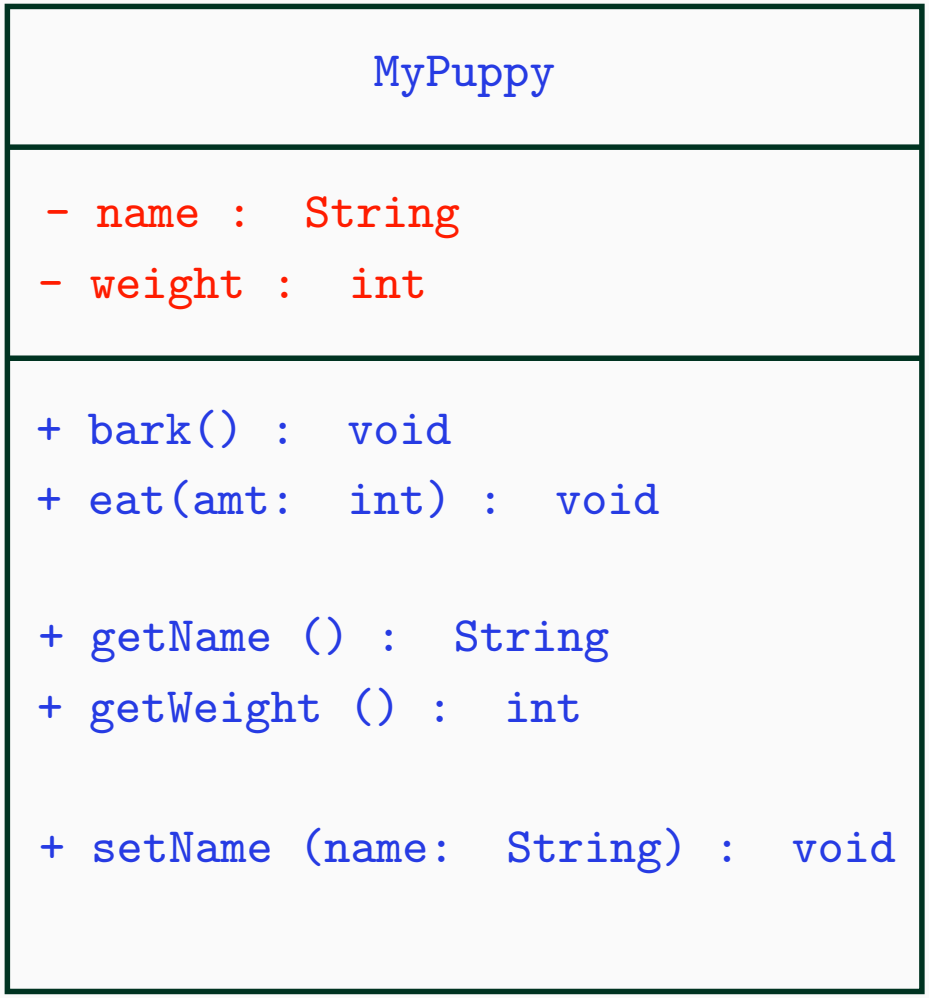


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    private String name;
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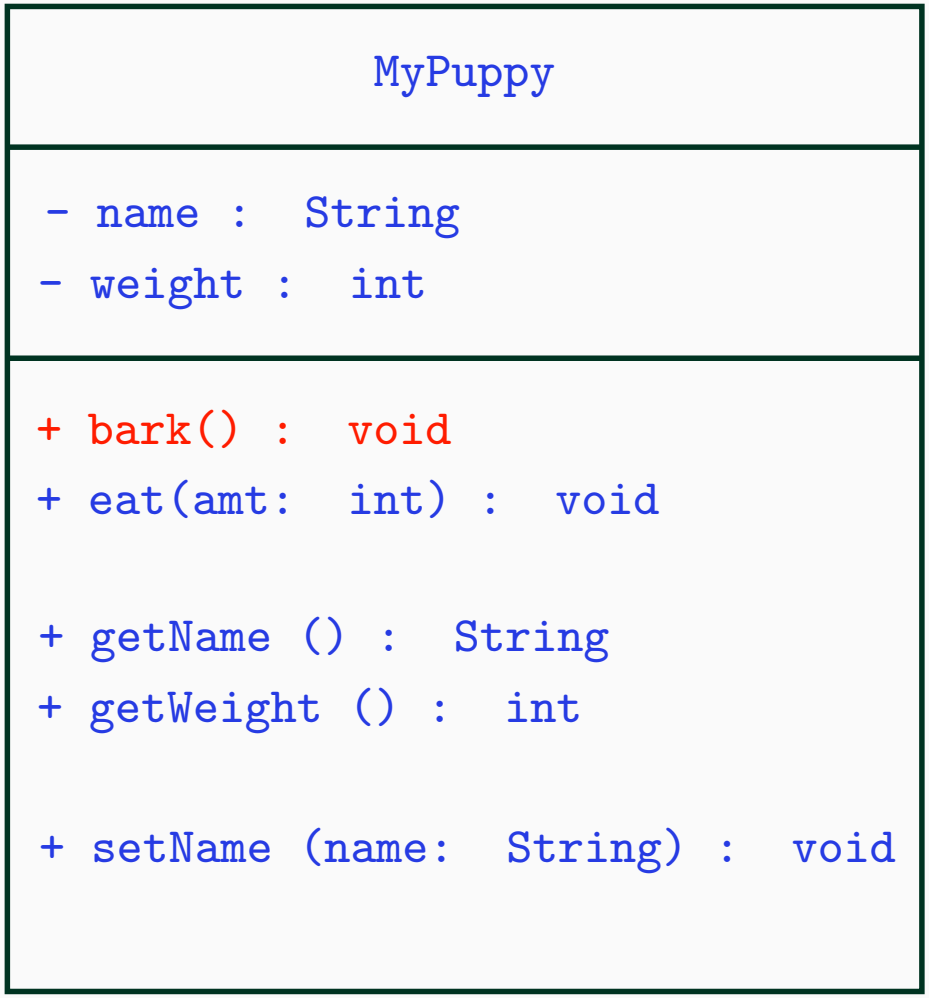


```
public class MyPuppy
{
    private String name;
    private int weight;

    public void bark ()
    {   System.out.println (name
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                + "...arf!\n");
    }


}
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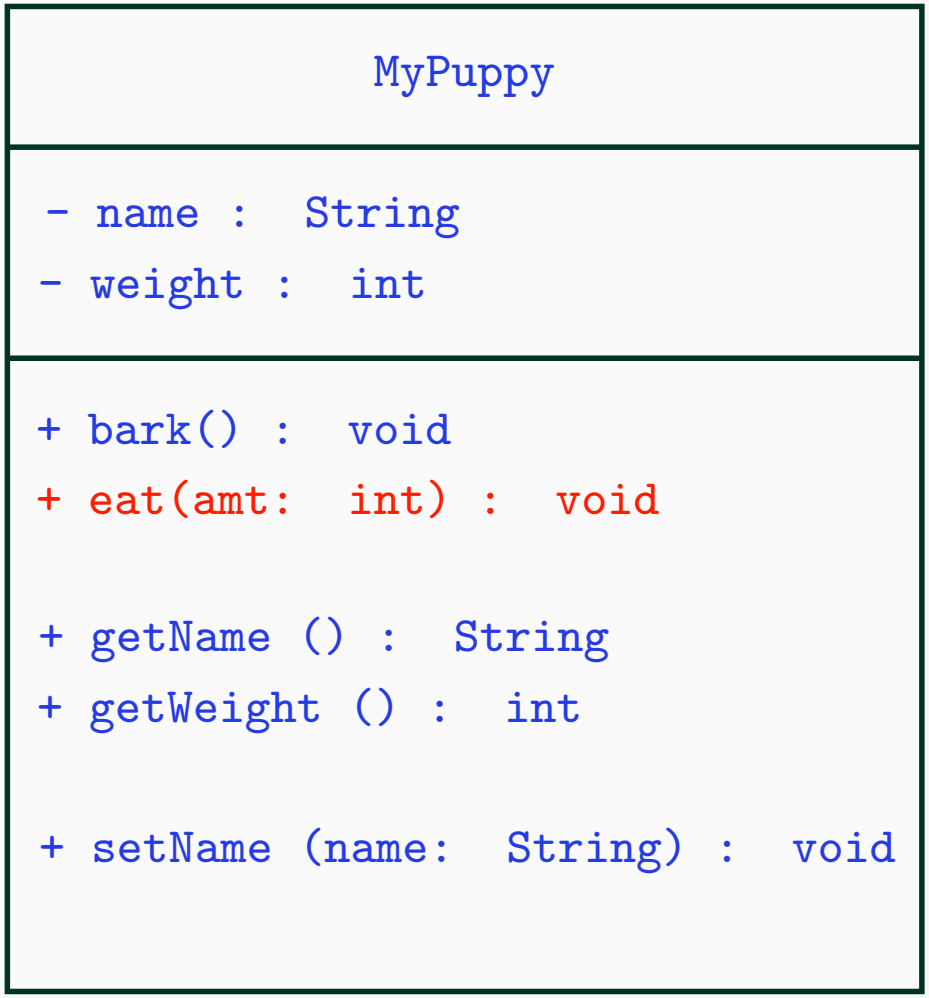


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    private String name;
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    public void bark ()
    {   System.out.println (name
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    }

    public void eat (int amt)
    {   weight += amt / 2;
        System.out.println (name
                + "burps!\n");
    }
}
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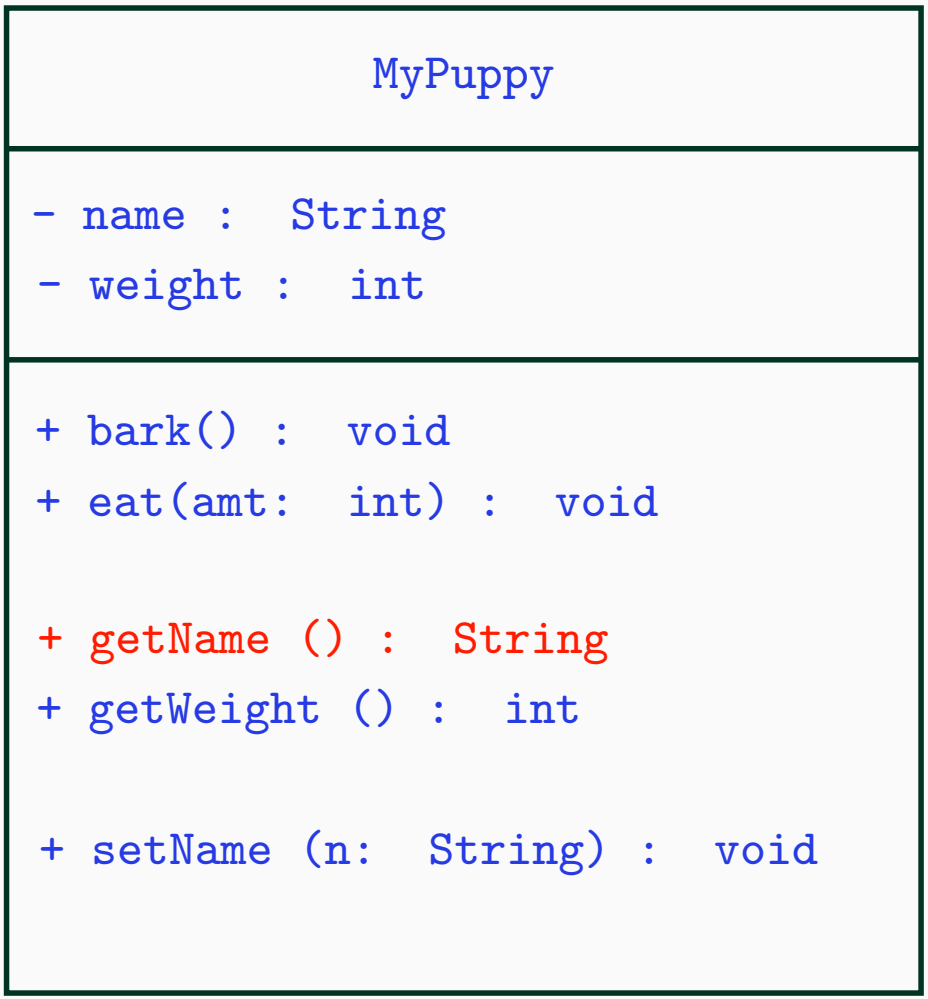


```
public class MyPuppy
{
    private String name;
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        :
    public String getName ()
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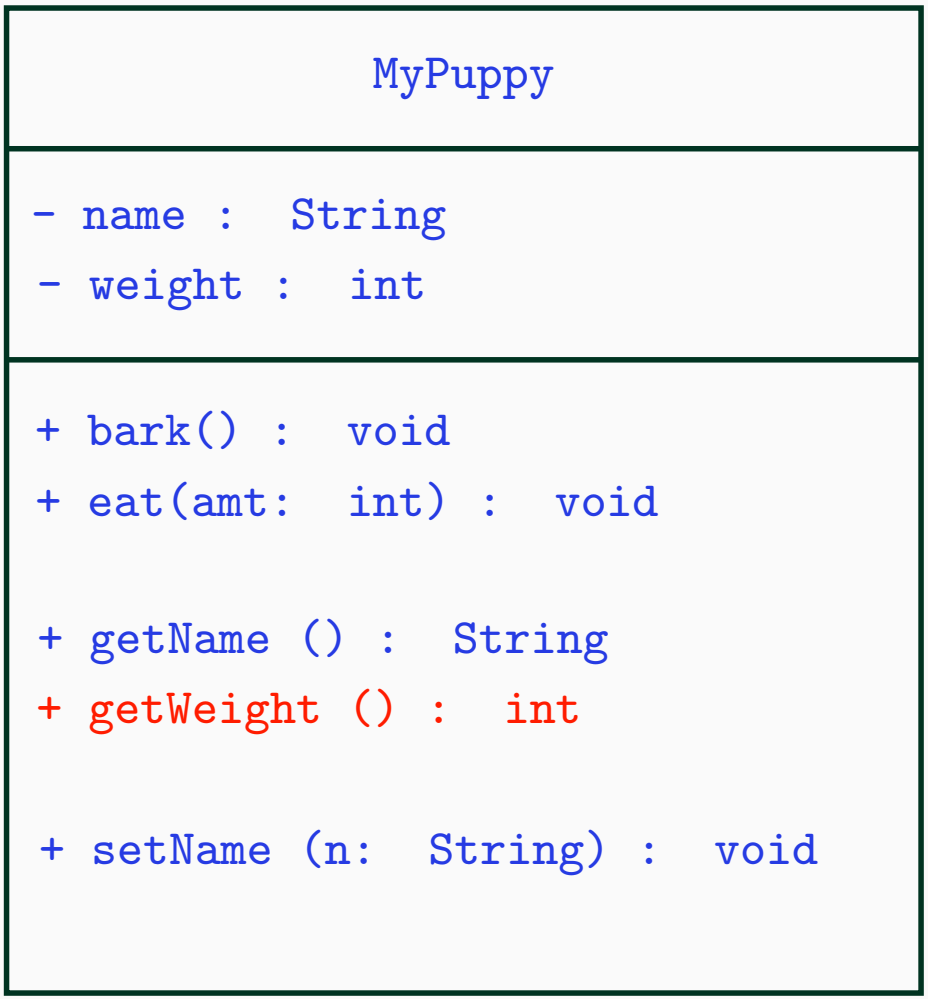


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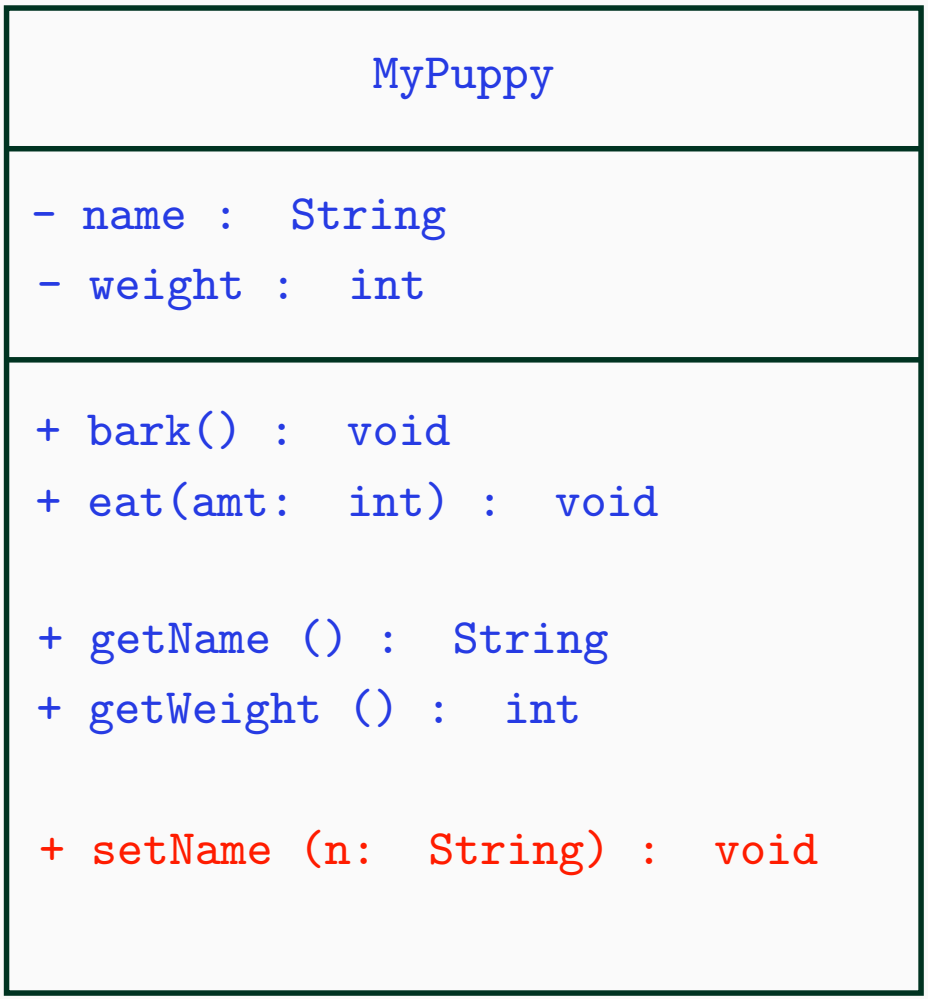


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`MyPuppy` driver class

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System.out.println (dog.getName());
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1. Create the first puppy. ▸ instantiation

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dog = new MyPuppy ();
```

2. Display the puppy's name and weight.

```
System.out.println (dog.getName());
System.out.println (dog.getWeight());
```

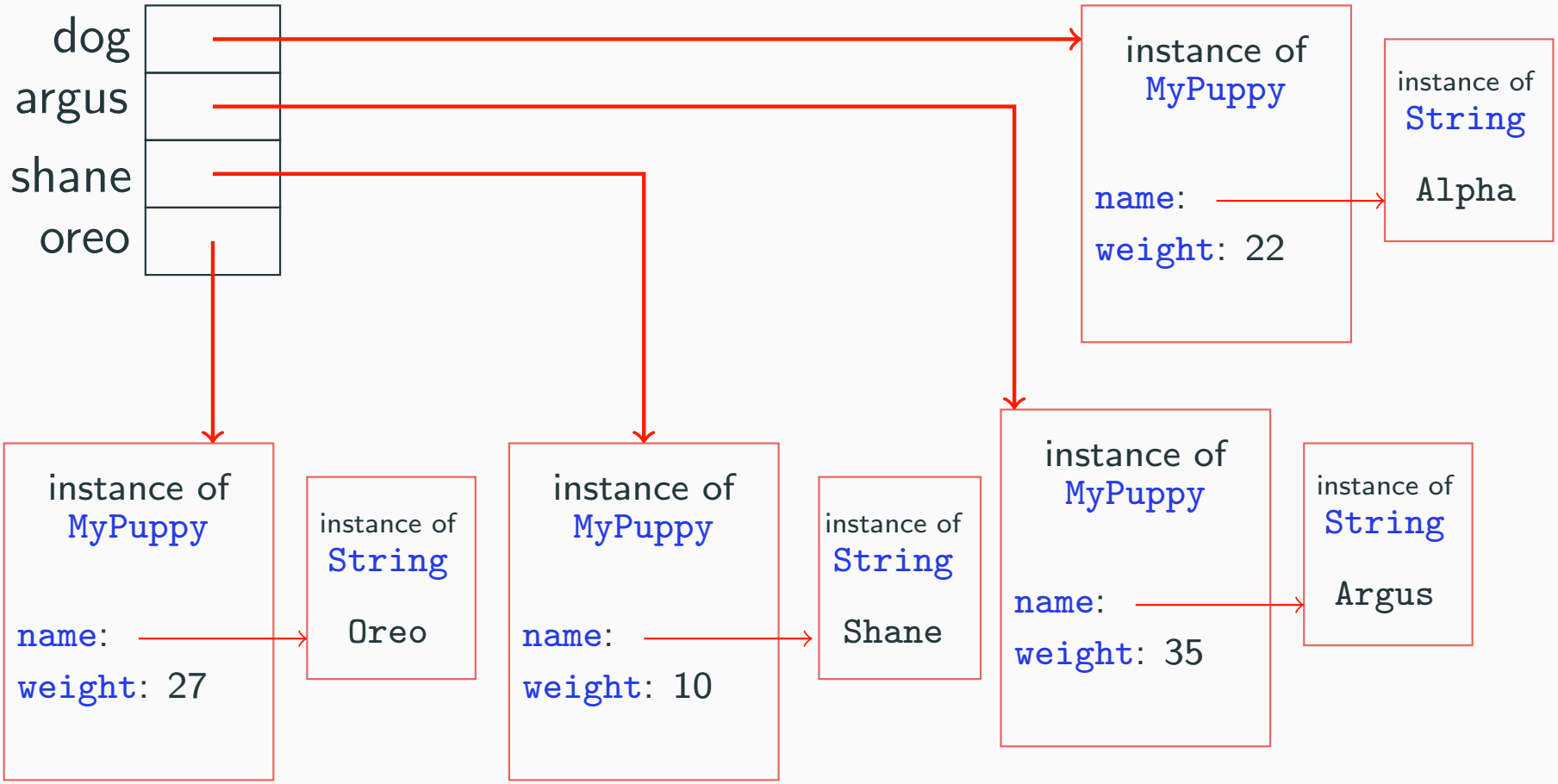
3. Name this puppy Alpha. Alpha eats 5 units of dog food. Alpha barks. Display Alpha's current weight.

MyPuppy driver class

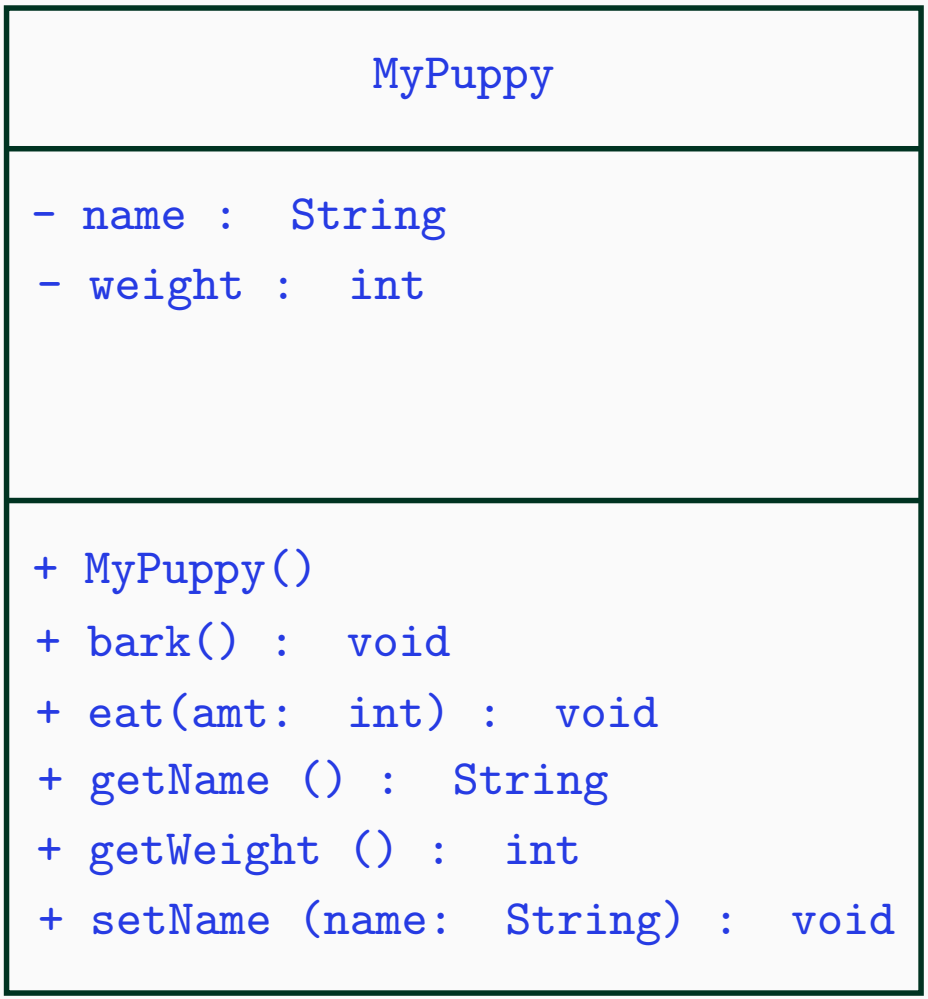
Now...

1. Create three more puppies: Argus, Shane, and Oreo.
2. It's feeding time again!
    - Alpha eats 20 units of dog food.
    - Argus eats 50 units of dog food.
    - Oreo eats 35 units of dog food.
    - Shane is on diet, and will just eat later.
3. Display the current weight of the puppies.

Alpha, Argus, Oreo, and Shane



MyPuppy class (with constructor)

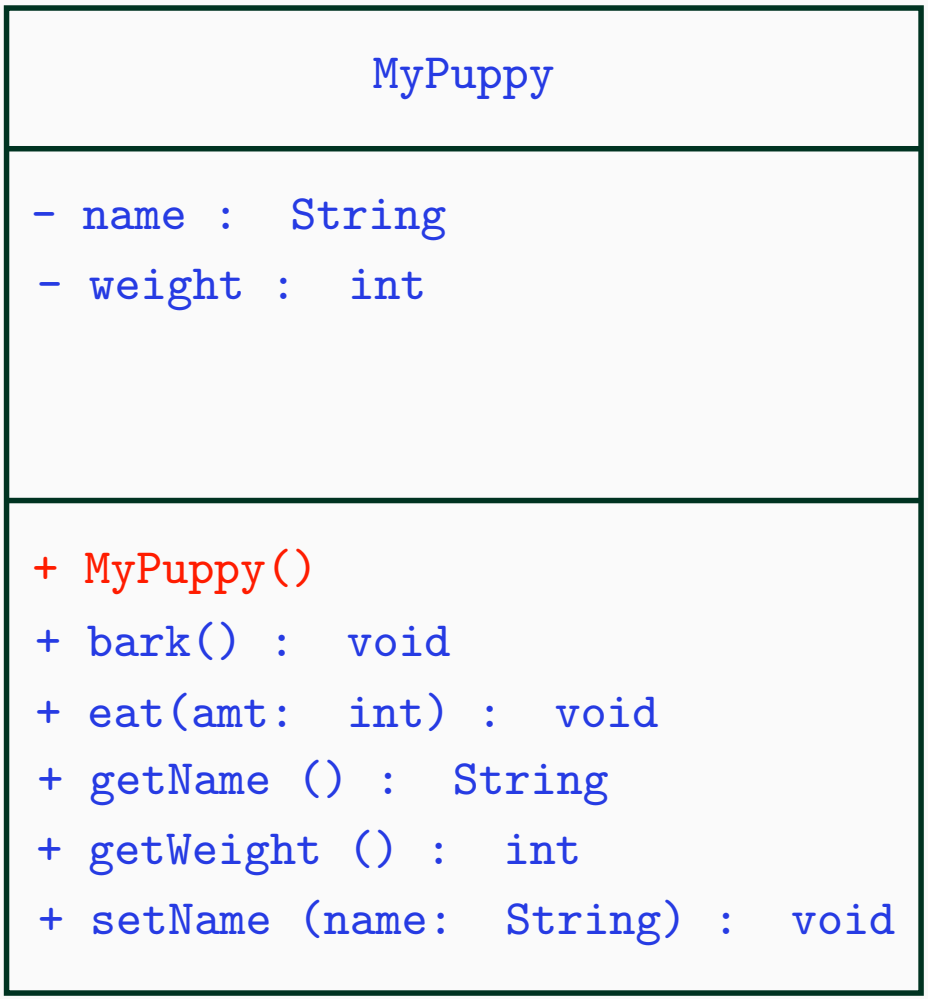



```
public class MyPuppy
{
    private String name;
    private int weight;



}
```

MyPuppy class (with constructor)




```
public class MyPuppy
{
    private String name;
    private int weight;

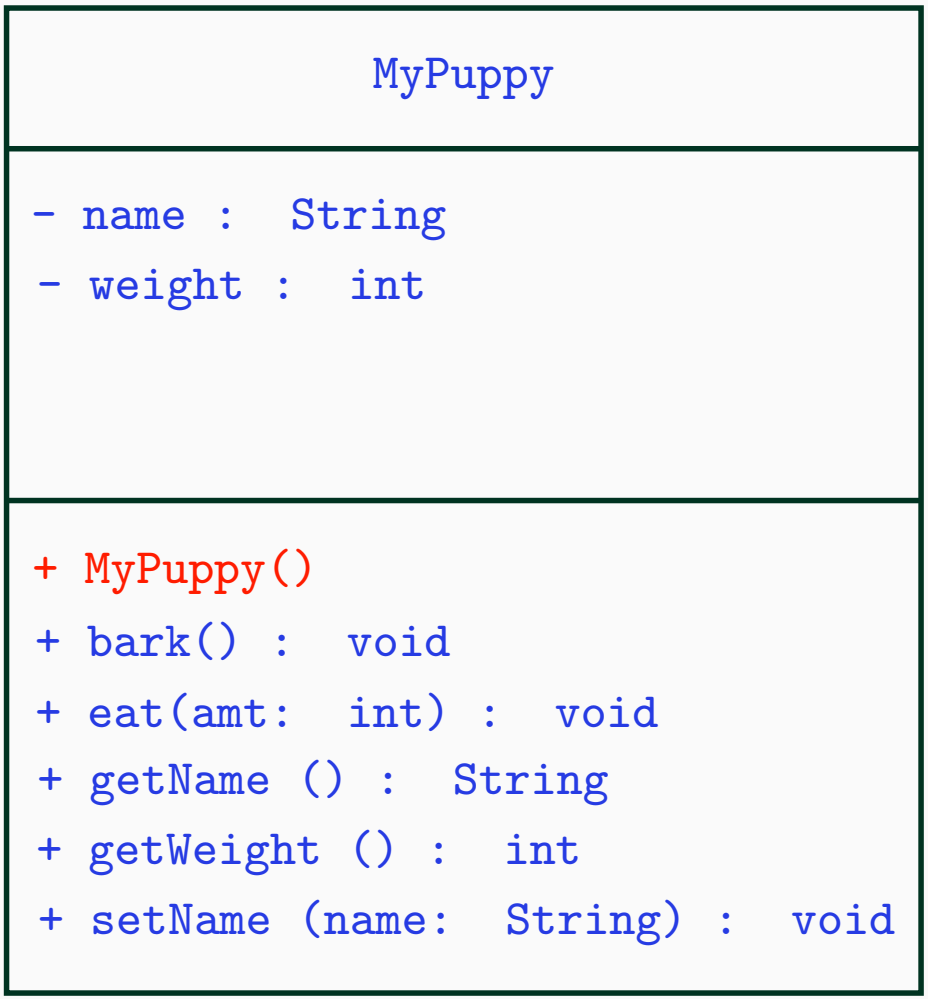
    public MyPuppy ()
    {


    }



}
```

MyPuppy class (with constructor)



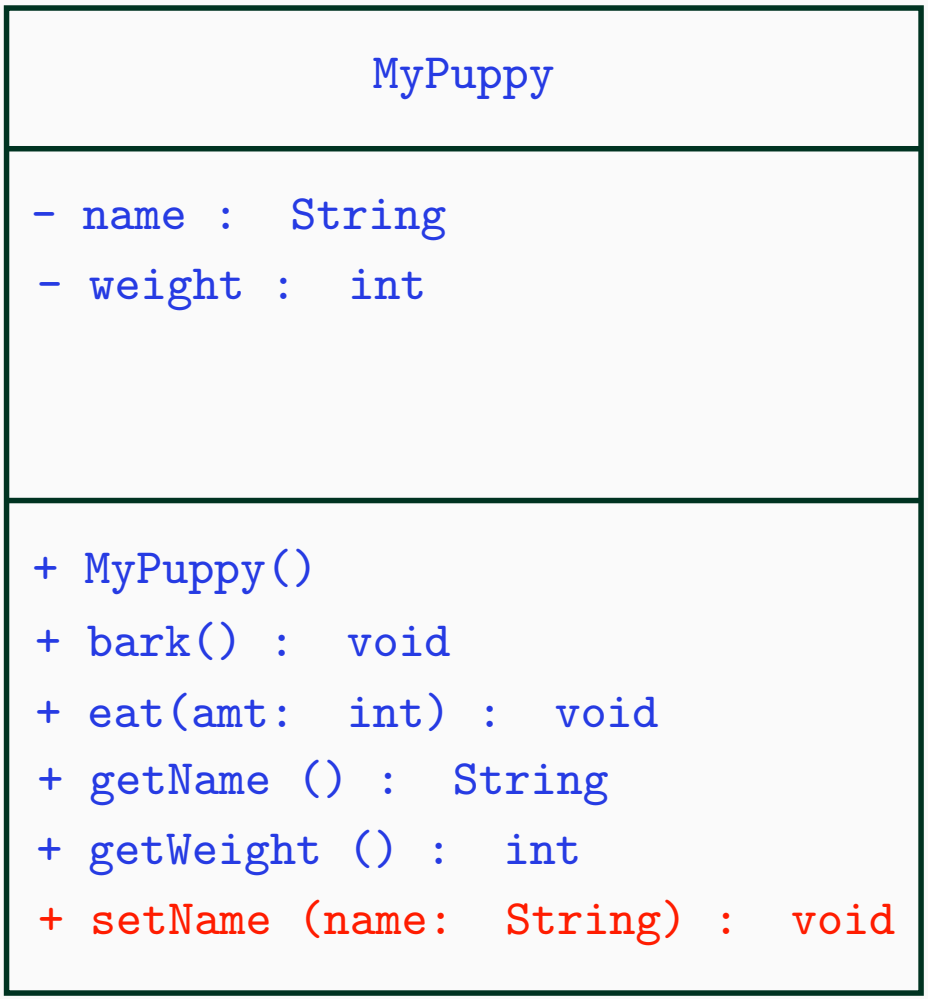

```
public class MyPuppy
{
    private String name;
    private int weight;

    public MyPuppy ()
    {
        name = "puppy";
        weight = 10;
    }




}
```

MyPuppy class (with constructor)

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public class MyPuppy
{
    private String name;
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    public MyPuppy ()
    {
        name = "puppy";
        weight = 10;
    }

    public void setName (String name)
    {

    }
}
```

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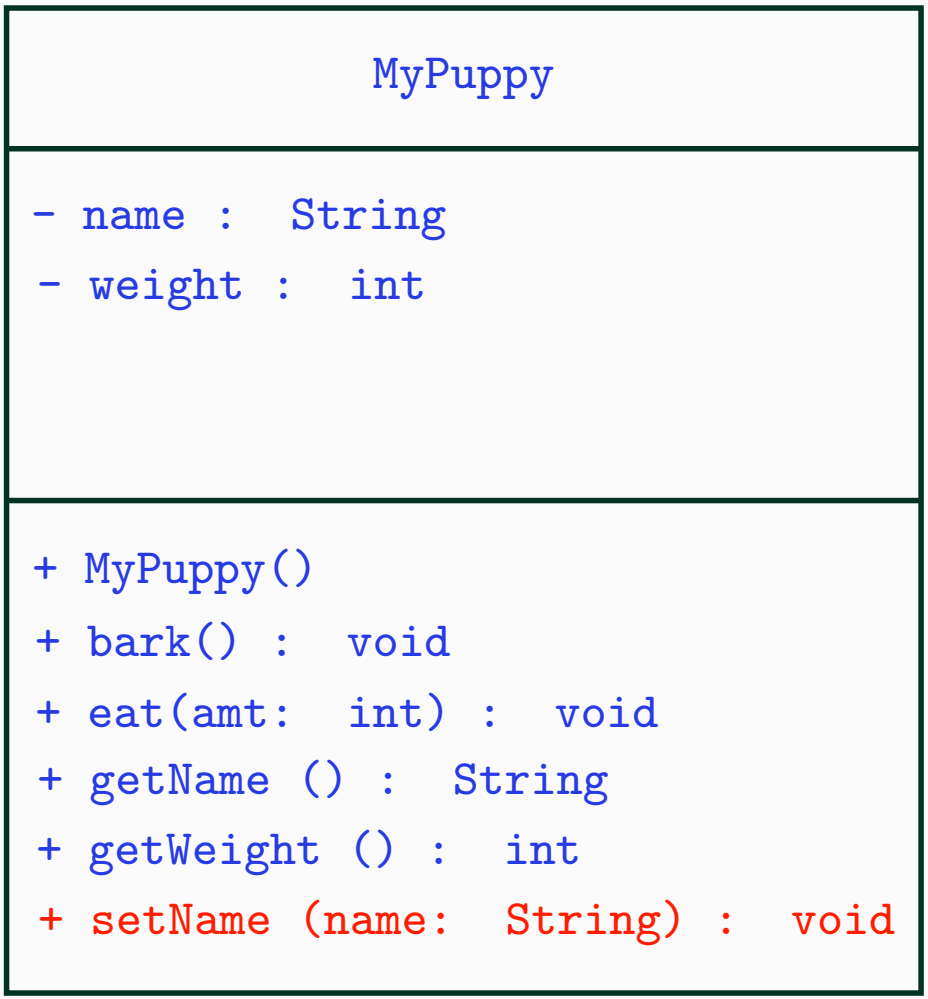


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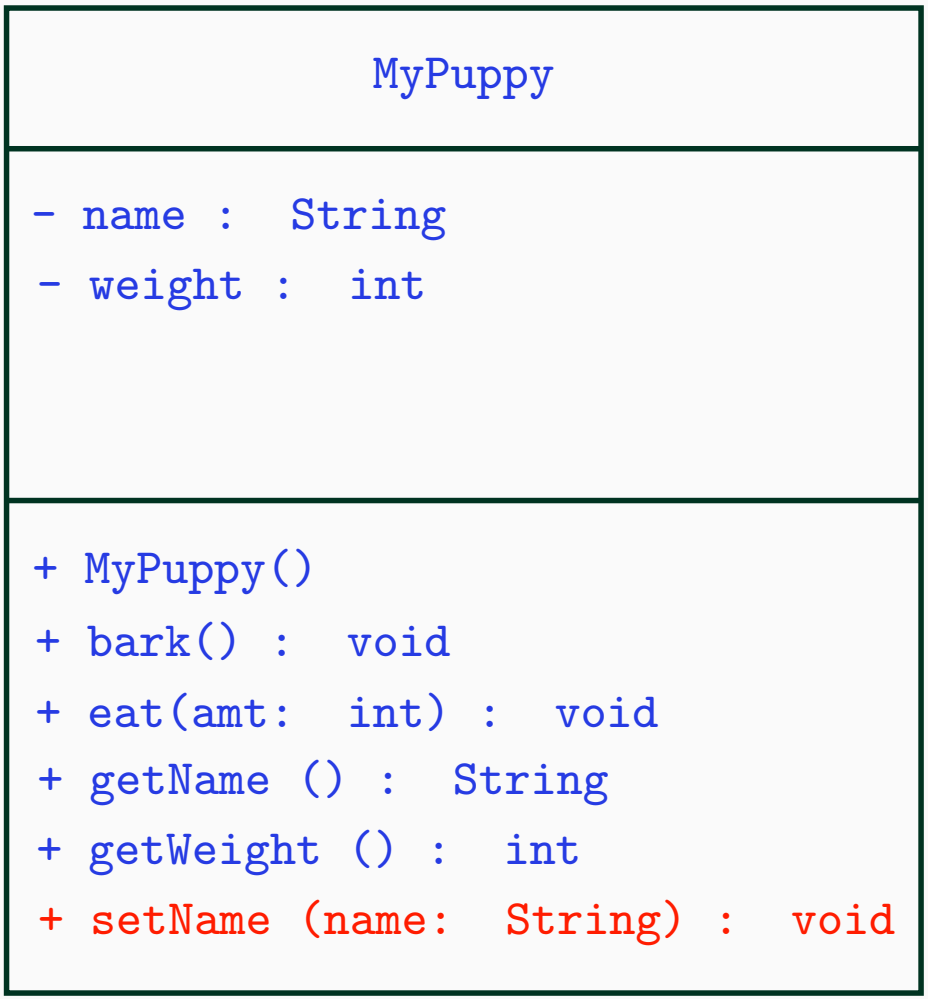


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public class MyPuppy
{
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    public MyPuppy ()
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        name = "puppy";
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    }

    public void setName (String name)
    {
        this.name = name;
    }
}
```

The keyword `this`

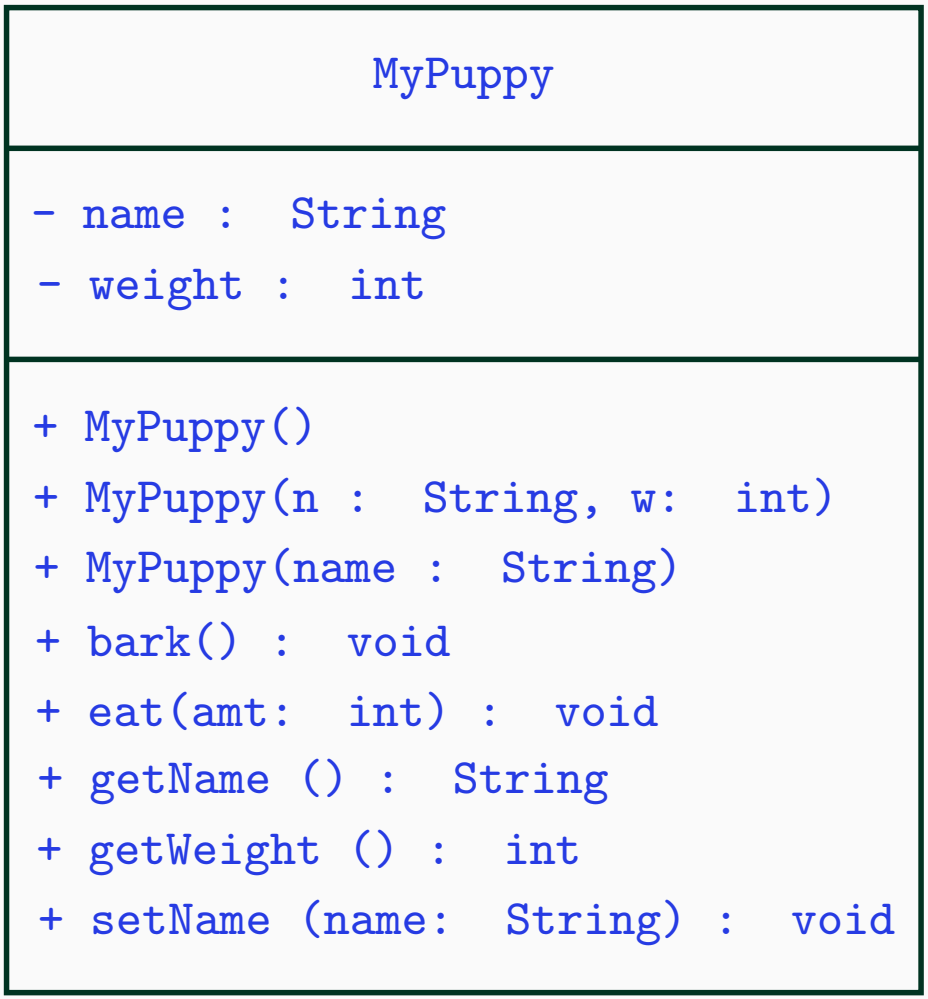
- used to refer to *this* instance inside a class definition.
- resolves naming conflict between an attribute (member variable) and a parameter of the method
- when the statement `return this;` is used inside a method, that method returns *this* instance to the caller.

Activity

After updating your `MyPuppy` class, compile and run the driver class.

How is the output now different from the output earlier?

MyPuppy class (with overloaded constructors)

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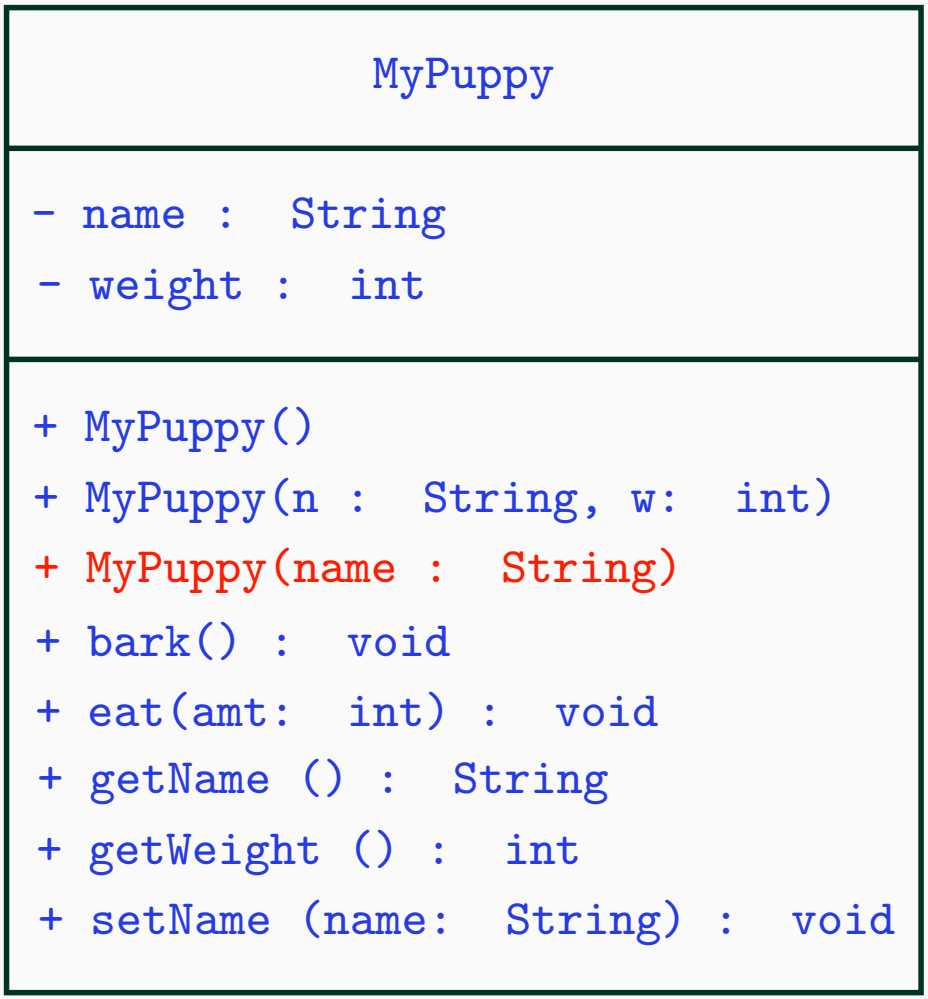


```
public class MyPuppy
{   private String name;
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    public MyPuppy ()
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    }

    public MyPuppy (String name)
    {

    }



}
```

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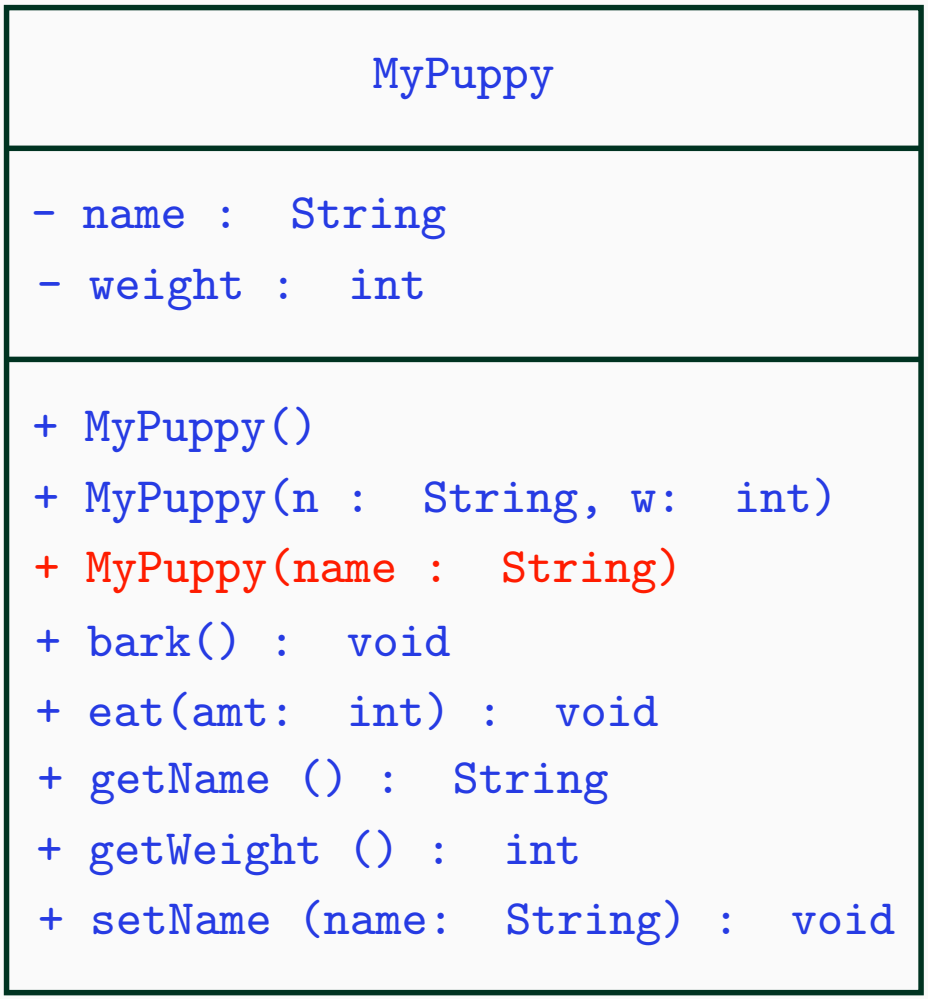


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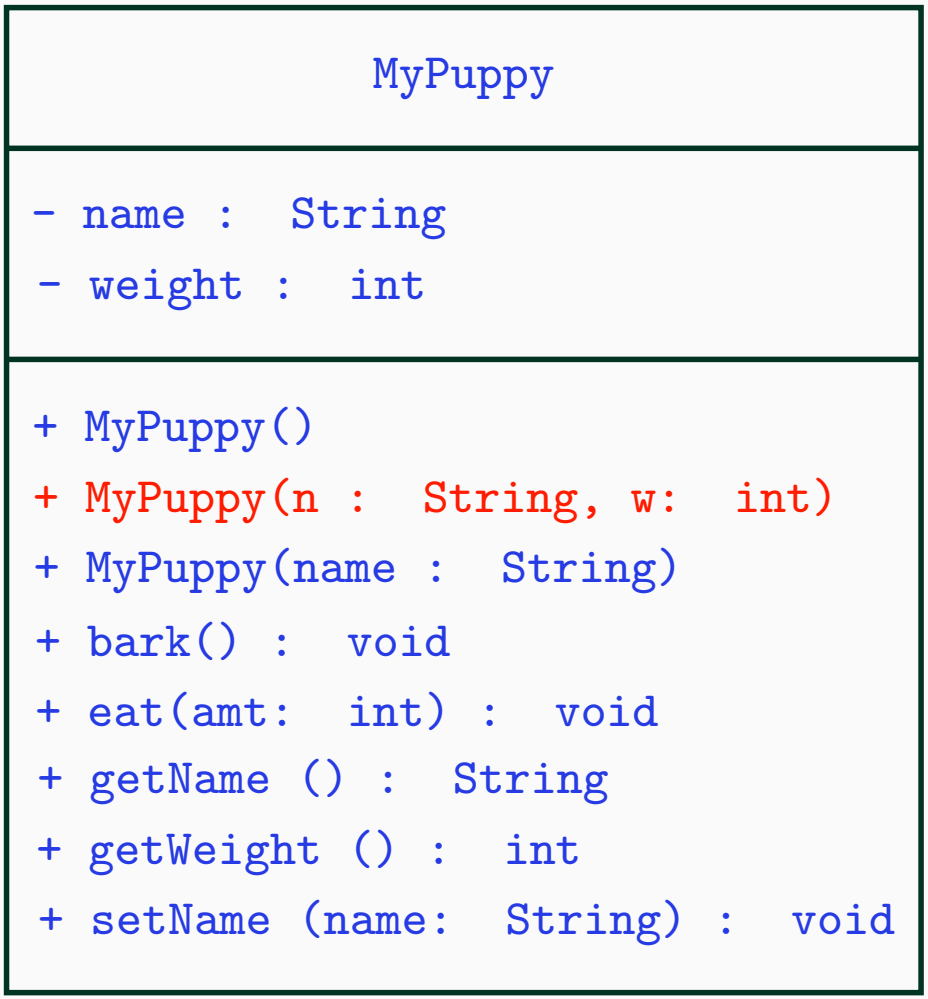


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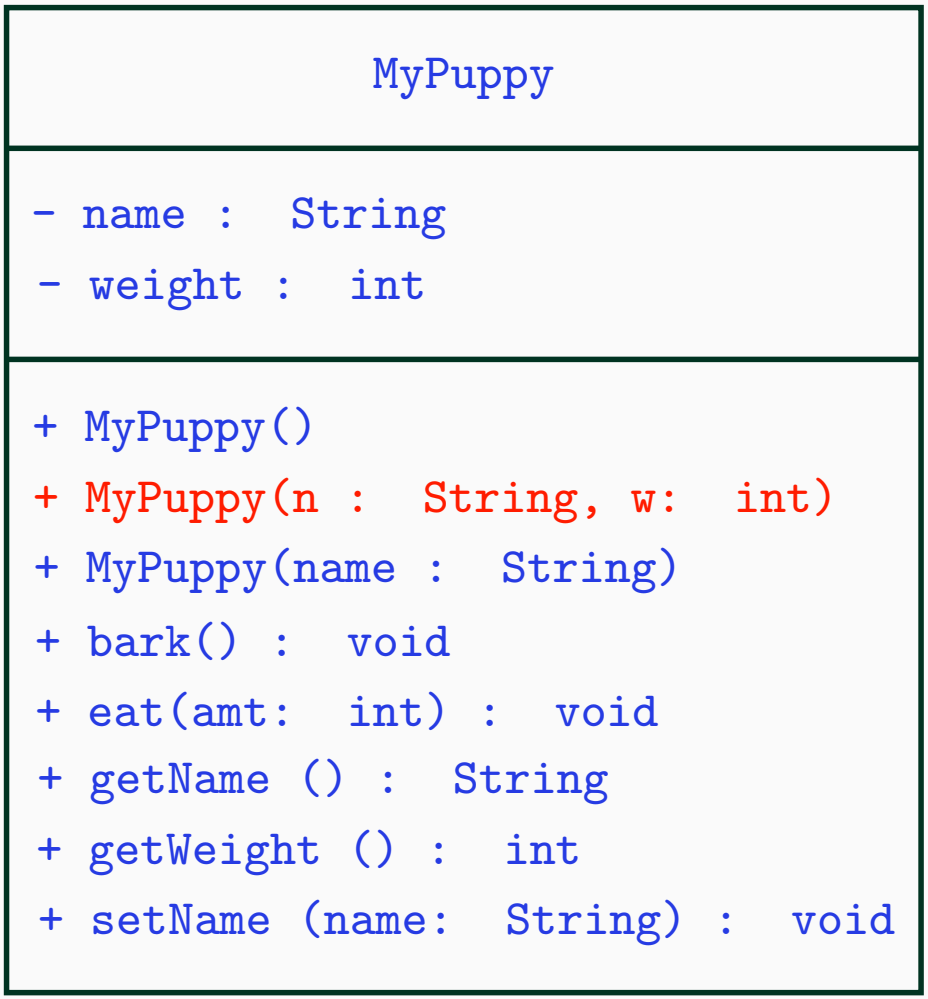


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```

this()

- used to call another constructor in the same class. This is what is called *explicit constructor invocation*.
- if used, must always be the first line in the constructor.

Activity

After updating your `MyPuppy` class, update your driver class.

Update how the three puppies Argus, Shane, and Oreo are created.

- Argus is the puppy's name when created.
- Shane's weight is 30 when created.
- Oreo's name was originally Mocha, and has a weight of 25 (when it was created).

Compile and run your program.

`Date` class

Code your `Date` class.

☺ **Thank you!** ☺

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- Recall: A class is just a blueprint. The realization of this blueprint is the object of this class.

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◂ Back