

Lecture

Inheritance

Syntax





Inheritance – Syntax

```
class Superclass:  
    # Body
```

```
class Subclass(SuperClass):  
    # Body
```



Inheritance – Syntax

```
class Superclass:
```

```
    # Body
```

```
class Subclass(Superclass):
```

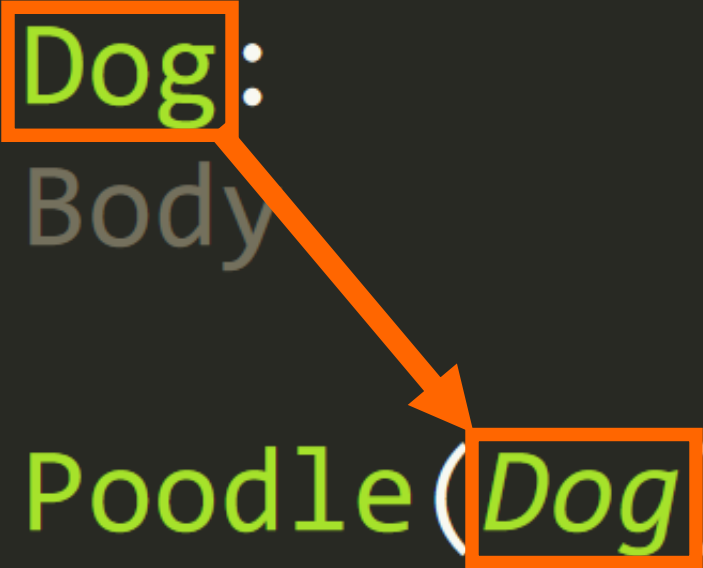
```
    # Body
```



Inheritance – Syntax

```
class Dog:
    # Body

class Poodle(Dog):
    # Body
```

An orange arrow points from the `Dog` class name in the first code block to the `Dog` argument in the parentheses of the `Poodle` class definition in the second code block, illustrating that `Poodle` inherits from `Dog`.



Inheritance – Syntax

```
class Dog:  
    # Body
```

```
class Poodle(Dog):  
    # Body
```

Dog



Poodle



Inheritance – Syntax

```
class Dog:

    def __init__(self, name, age, color, blood_type, vaccines=None):
        self.name = name
        self.age = age
        self.color = color
        self._blood_type = blood_type
        self.vaccines = vaccines

class Poodle(Dog):

    def poodle_introduction(self):
        print(f"Hi, my name is {self._name}. I'm a Poodle")
```

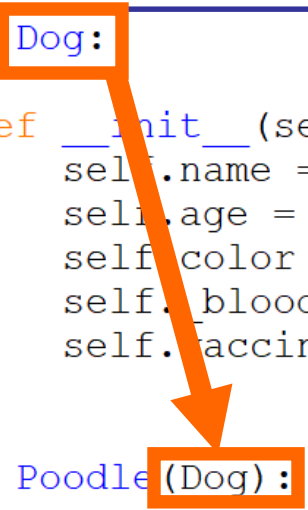




Inheritance – Syntax

```
class Dog:
    def __init__(self, name, age, color, blood_type, vaccines=None):
        self.name = name
        self.age = age
        self.color = color
        self.blood_type = blood_type
        self.vaccines = vaccines

class Poodle(Dog):
    def poodle_introduction(self):
        print(f"Hi, my name is {self._name}. I'm a Poodle")
```





Inheritance – Syntax

```
class Dog:

    def __init__(self, name, age, color, blood_type, vaccines=None):
        self.name = name
        self.age = age
        self.color = color
        self._blood_type = blood_type
        self.vaccines = vaccines

class Poodle(Dog):

    def poodle_introduction(self):
        print(f"Hi, my name is {self._name}. I'm a Poodle")
```

**All the instances of
Poodle will have
these attributes**



Inheritance – Syntax

```
>>> class Dog:

    def __init__(self, name, age, color, blood_type, vaccines=None):
        self.name = name
        self.age = age
        self.color = color
        self._blood_type = blood_type
        self.vaccines = vaccines

>>> class Poodle(Dog):

    def poodle_introduction(self):
        print(f"Hi, my name is {self._name}. I'm a Poodle")

>>> my_poodle = Poodle("Nora", 5, "Black", "DEA 4")
>>> my_poodle.name
'Nora'
>>> my_poodle.age
5
>>> my_poodle.color
'Black'
```



Inheritance – Syntax

```
>>> class Dog:

    def __init__(self, name, age, color, blood_type, vaccines=None):
        self.name = name
        self.age = age
        self.color = color
        self._blood_type = blood_type
        self.vaccines = vaccines

>>> class Poodle(Dog):

    def poodle_introduction(self):
        print(f"Hi, my name is {self._name}. I'm a Poodle")

>>> my_poodle = Poodle("Nora", 5, "Black", "DEA 4")
>>> my_poodle.name
'Nora'
>>> my_poodle.age
5
>>> my_poodle.color
'Black'
```



Inheritance – Syntax

```
>>> class Dog:
    def __init__(self, name, age, color, blood_type, vaccines=None):
        self.name = name
        self.age = age
        self.color = color
        self._blood_type = blood_type
        self.vaccines = vaccines

>>> class Poodle(Dog):
    def poodle_introduction(self):
        print(f"Hi, my name is {self._name}. I'm a Poodle")

>>> my_poodle = Poodle("Nora", 5, "Black", "DEA 4")
>>> my_poodle.name
'Nora'
>>> my_poodle.age
5
>>> my_poodle.color
'Black'
```



Inheritance – Syntax

```
>>> class Dog:

    def __init__(self, name, age, color, blood_type, vaccines=None):
        self.name = name
        self.age = age
        self.color = color
        self._blood_type = blood_type
        self.vaccines = vaccines

>>> class Poodle(Dog):

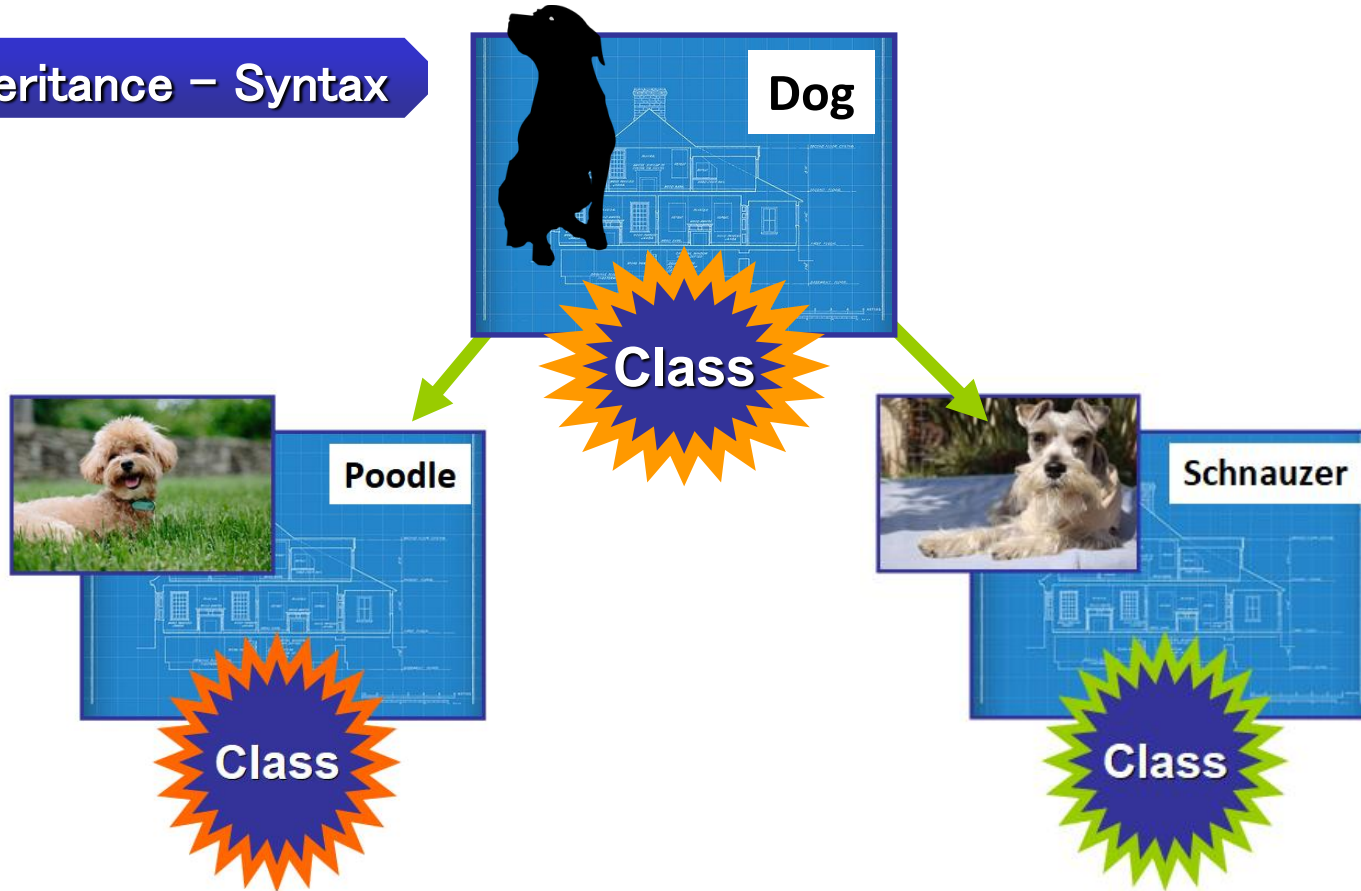
    def poodle_introduction(self):
        print(f"Hi, my name is {self._name}. I'm a Poodle")

>>> my_poodle = Poodle("Nora", 5, "Black", "DEA 4")
>>> my_poodle.name
'Nora'
>>> my_poodle.age
5
>>> my_poodle.color
'Black'
```

**The
attributes
exist**



Inheritance – Syntax





Inheritance – Syntax

```
class Dog:

    def __init__(self, name, age, color, blood_type, vaccines=None):
        self.name = name
        self.age = age
        self.color = color
        self._blood_type = blood_type
        self.vaccines = vaccines

class Poodle(Dog):

    def poodle_introduction(self):
        print(f"Hi, my name is {self._name}. I'm a Poodle")

class Schnauzer(Dog):

    def schnauzer_introduction(self):
        print(f"Hi, my name is {self._name}. I'm a Schnauzer")
```



Inheritance – Syntax

```
class Dog:
    def __init__(self, name, age, color, blood_type, vaccines=None):
        self.name = name
        self.age = age
        self.color = color
        self._blood_type = blood_type
        self.vaccines = vaccines

class Poodle(Dog):
    def poodle_introduction(self):
        print(f"Hi, my name is {self._name}. I'm a Poodle")

class Schnauzer(Dog):
    def schnauzer_introduction(self):
        print(f"Hi, my name is {self._name}. I'm a Schnauzer")
```



Inheritance – Syntax

```
class Dog:

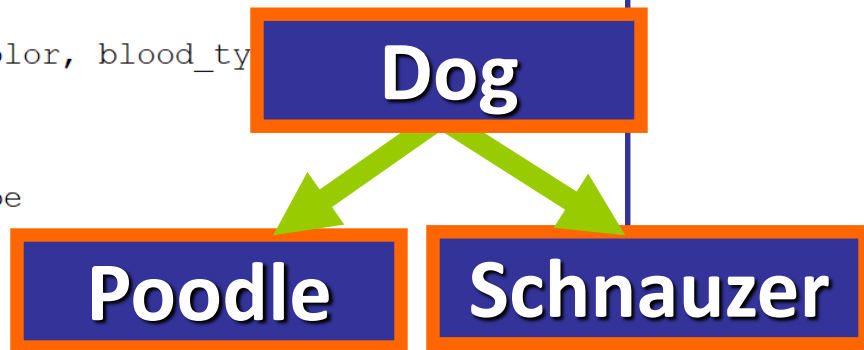
    def __init__(self, name, age, color, blood_type, vaccines):
        self.name = name
        self.age = age
        self.color = color
        self._blood_type = blood_type
        self.vaccines = vaccines
```

```
class Poodle(Dog):
```

```
    def poodle_introduction(self):
        print(f"Hi, my name is {self._name}. I'm a Poodle")
```

```
class Schnauzer(Dog):
```

```
    def schnauzer_introduction(self):
        print(f"Hi, my name is {self._name}. I'm a Schnauzer")
```





Inheritance

