

```
# When we create a class we can inherit all of the fields and methods from another class
# This is called inheritance
# The class that inherits is called the subclass and the class we inherit from is the super class
# This will be our super class
```

```
class Animal:
```

```
    def __init__(self, birth_type="Unknown", appearance="Unknown", blooded="Unknown"):
        self.__birth_type = birth_type
        self.__appearance = appearance
        self.__blooded = blooded
```

```
    # The getter method
```

```
    @property
```

```
    def birth_type(self):
```

```
    # When using getters and setters don't forget the __
        return self.__birth_type
```

```
    @birth_type.setter
```

```
    def birth_type(self, birth_type):
        self.__birth_type = birth_type
```

```
    @property
```

```
    def appearance(self):
```

```
        return self.__appearance
```

```
    @appearance.setter
```

```
    def appearance(self, appearance):
        self.__appearance = appearance
```

```
    @property
```

```
    def blooded(self):
```

```
        return self.__blooded
```

```
    @blooded.setter
```

```
    def blooded(self, blooded):
        self.__blooded = blooded
```

```
    # Can be used to cast our object as a string
```

```
    # type(self).__name__ returns the class name
```

```
    def __str__(self):
```

```
        return "A {} is {} it is {} it is " \
               "{}".format(type(self).__name__,
                           self.birth_type,
                           self.appearance,
                           self.blooded)
```

```
# Create a Mammal class that inherits from Animal
```

```
# You can inherit from multiple classes by separating
```

```
# the classes with a comma in the parentheses
```

```
class Mammal(Animal):
```

```
    def __init__(self, birth_type="born alive",
                  appearance="hair or fur",
                  blooded="warm blooded",
                  nurse_young=True):
```

```

        # Call for the super class to initialize fields
        Animal.__init__(self, birth_type,
                        appearance,
                        blooded)

        self.__nurse_young = nurse_young

# We can extend the subclasses
@property
def nurse_young(self):
    return self.__nurse_young

@nurse_young.setter
def nurse_young(self, nurse_young):
    self.__nurse_young = nurse_young

# Overwrite __str__
# You can use super() to refer to the superclass
def __str__(self):
    return super().__str__() + " and it is {} they nurse " \
        "their young".format(self.nurse_young)

class Reptile(Animal):
    def __init__(self, birth_type="born in an egg or born alive",
                appearance="dry scales",
                blooded="cold blooded"):

        # Call for the super class to initialize fields
        Animal.__init__(self, birth_type,
                        appearance,
                        blooded)

def main():
    animal1 = Animal("born alive")

    print(animal1.birth_type)

    # Call __str__()
    print(animal1)
    print()

    mammal1 = Mammal()

    print(mammal1)

    print(mammal1.birth_type)
    print(mammal1.appearance)
    print(mammal1.blooded)
    print(mammal1.nurse_young)
    print()

```

```
reptile1 = Reptile()

print(reptile1.birth_type)
print(reptile1.appearance)
print(reptile1.blooded)

main()
```