



## Add the `__init__()` Function

So far we have created a child class that inherits the properties and methods from its parent.

We want to add the `__init__()` function to the child class (instead of the `pass` keyword).

**Note:** The `__init__()` function is called automatically every time the class is being used to create a new object.

### Example

Add the `__init__()` function to the `Student` class:

```
class Student(Person):
    def __init__(self, fname, lname):
        #add properties etc.
```

When you add the `__init__()` function, the child class will no longer inherit the parent's `__init__()` function.

**Note:** The child's `__init__()` function **overrides** the inheritance of the parent's `__init__()` function.

To keep the inheritance of the parent's `__init__()` function, add a call to the parent's `__init__()` function:

### Example

```
class Student(Person):
    def __init__(self, fname, lname):
        Person.__init__(self, fname, lname)
```

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Now we have successfully added the `__init__()` function, and kept the inheritance of the parent class, and we are ready to add functionality in the `__init__()` function.

## Use the `super()` Function

Python also has a `super()` function that will make the child class inherit all the methods and properties from its parent:

### Example

```
class Student(Person):
    def __init__(self, fname, lname):
        super().__init__(fname, lname)
```

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By using the `super()` function, you do not have to use the name of the parent element, it will automatically inherit the methods and properties from its parent.

## Add Properties

### Example

Add a property called `graduationyear` to the `Student` class:

```
class Student(Person):
    def __init__(self, fname, lname):
        super().__init__(fname, lname)
        self.graduationyear = 2019
```

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In the example below, the year `2019` should be a variable, and passed into the `Student` class when creating student objects. To do so, add another parameter in the `__init__()` function:

### Example

Add a `year` parameter, and pass the correct year when creating objects:

```
class Student(Person):
    def __init__(self, fname, lname, year):
```

```
def __init__(self, fname, lname, year):  
    super().__init__(fname, lname)  
    self.graduationyear = year  
  
x = Student("Mike", "Olsen", 2019)
```

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## Add Methods

### Example

Add a method called `welcome` to the `Student` class:

```
class Student(Person):  
    def __init__(self, fname, lname, year):  
        super().__init__(fname, lname)  
        self.graduationyear = year  
  
    def welcome(self):  
        print("Welcome", self.firstname, self.lastname, "to the class of", self.graduationyear)
```

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If you add a method in the child class with the same name as a function in the parent class, the inheritance of the parent method will be overridden.

## Test Yourself With Exercises

### Exercise:

What is the correct syntax to create a class named `Student` that will inherit properties and methods from a class named `Person`?

```
class [REDACTED] :
```

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