

Signature

- Calls to the function will look like this (with the same name and number of arguments). Example: **double(3)**.
- When you call **double**, the argument can be any expression. (The name **x** doesn't affect calls.)
- In the body of the function, **x** is the name of the argument, as if the body included the code **x = <the first argument>**.

Documentation (“docstring”)

- Text that describes what the function does.
- Can be any string, traditionally triple-quoted so it can span several lines.
- Traditionally, the first line describes what the function does, briefly.
- Subsequent lines can give more detail and examples.
- Running **double?** will show this text, just like **max?** will show the documentation for the built-in function **max**.

Body

- All the code in here runs each time you call the function.
- The special statement **return** tells Python what the value of each call to this function is: it's the value of the expression after **return**.
- For example, the value of **double(3)** is **6**. (Remember, when the argument is **3**, it's like the body starts with **x = 3**.)
- Often, the body will have multiple lines of code that build up to computing the **returned** value. You can write any Python code here that you could write anywhere else.

Indentation

- Each line of code in the body is indented (that is, it's preceded by spaces).
- Traditionally, we use 2 or 4 spaces. They only need to be consistent.
- This tells Python that those lines are part of the body.
- The function's body ends at any unindented line.

```
# Our first function definition  
  
def double(x):  
    """ Double x """  
    return 2*x
```

The diagram highlights the following parts of the code:

- Signature:** The `def double(x):` line is highlighted with an orange box. An orange arrow points from the word "Signature" to this box.
- Docstring:** The `""" Double x """` line is highlighted with a purple box. A purple arrow points from the word "Documentation ('docstring') to this box.
- Body:** The `return 2*x` line is highlighted with a blue box. A blue arrow points from the word "Body" to this box.
- Indentation:** The entire function body (the docstring and the return statement) is highlighted with a green box. A green arrow points from the word "Indentation" to this box.