

Import

We can create and import our own modules

Allows us to use functions defined in different files

Python allows us to import files from our current directory, or the directories stored in **sys.path**

Checking whether `__name__ == "__main__"` allows us to conditionally execute code in a file

E.g. Code which executes when we run **python3 file.py** but not when we **import file**

Example: When you import this file, main() is executed!

NOTE: To import, we can say

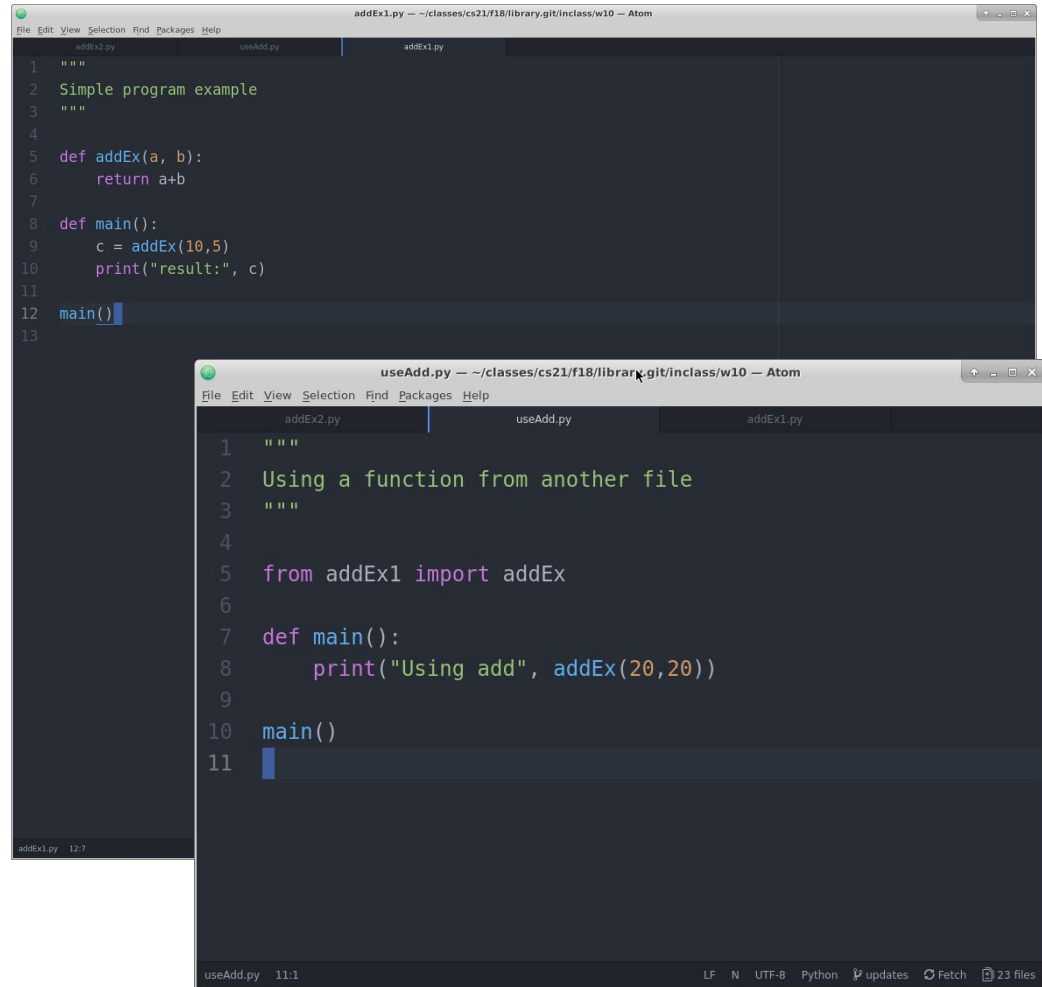
`import addEx1`

and call `addEx1.add`

or

`from addEx1 import addEx`

and call `addEx`



```
addEx1.py -- ~/classes/cs21/f18/library.git/inclass/w10 -- Atom
1  """
2  Simple program example
3  """
4
5  def addEx(a, b):
6      return a+b
7
8  def main():
9      c = addEx(10,5)
10     print("result:", c)
11
12     main()
13
```

```
useAdd.py -- ~/classes/cs21/f18/library.git/inclass/w10 -- Atom
File Edit View Selection Find Packages Help
addEx2.py useAdd.py addEx1.py
1  """
2  Using a function from another file
3  """
4
5  from addEx1 import addEx
6
7  def main():
8      print("Using add", addEx(20,20))
9
10     main()
11
```

addEx1.py 12:7

useAdd.py 11:1

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Example: When you import this file, main() is NOT executed!

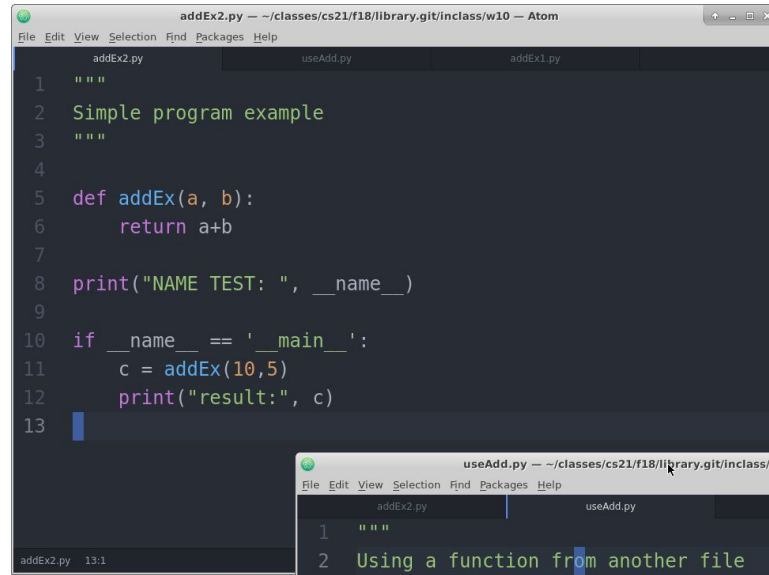
NOTE: `__name__` is a special variable which Python initializes when it executes a file. When you run

`python3 addEx2.py`

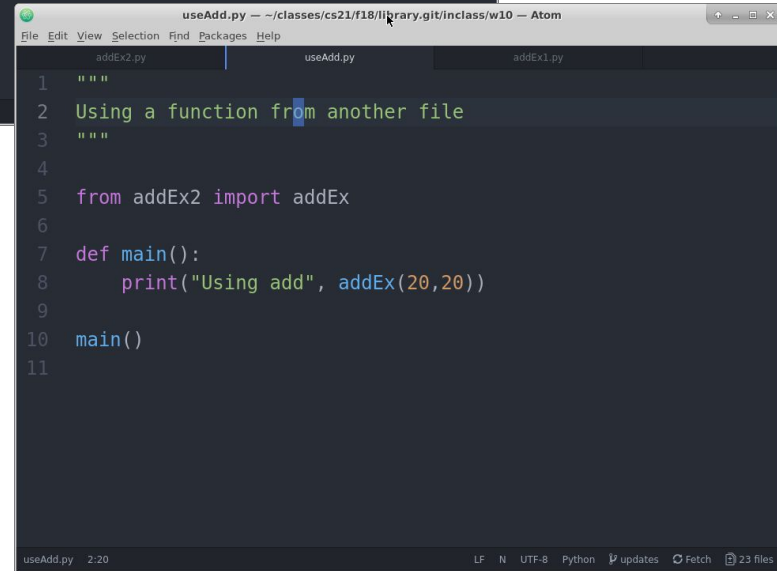
`__name__` is `"__main__"`

Otherwise,

`__name__` is `"addEx2"`

A screenshot of the Atom text editor window titled 'addEx2.py'. The editor shows a Python script with a docstring, a function definition, and a main block. The code is as follows:

```
1 """
2 Simple program example
3 """
4
5 def addEx(a, b):
6     return a+b
7
8 print("NAME TEST: ", __name__)
9
10 if __name__ == '__main__':
11     c = addEx(10,5)
12     print("result:", c)
13
```

A screenshot of the Atom text editor window titled 'useAdd.py'. The editor shows a Python script that imports the 'addEx' function from 'addEx2' and calls it within a 'main' function. The code is as follows:

```
1 """
2 Using a function from another file
3 """
4
5 from addEx2 import addEx
6
7 def main():
8     print("Using add", addEx(20,20))
9
10 main()
11
```