

Python Programming

Creating Modules

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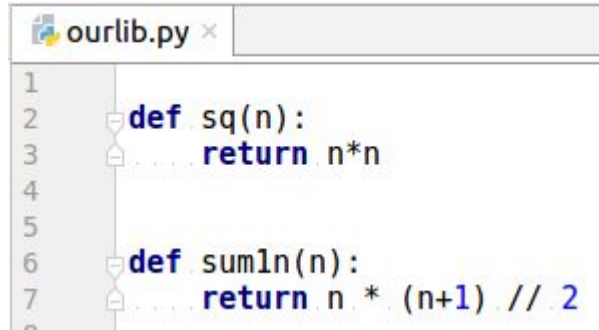
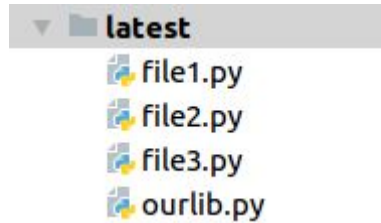
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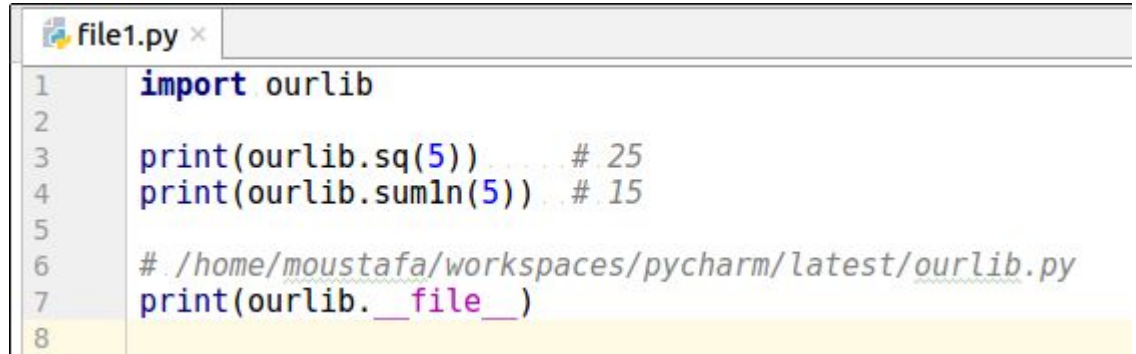
Modules

- As we learned, module = python file
- Today, we will create a module and use it by others



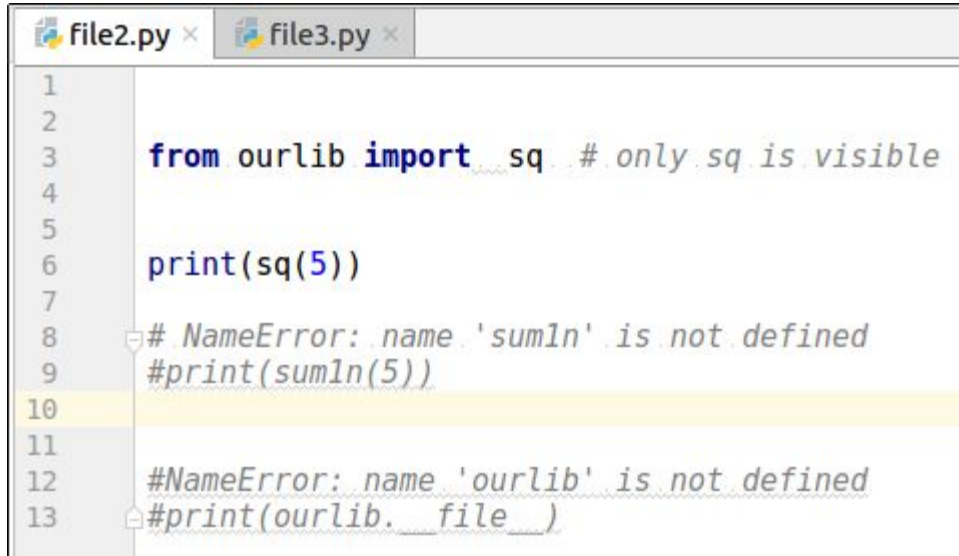
Using our module from file1.py

- We can now create another module
- **Run file1.py**
- Import the 'ourlib' module
- Call its 2 functions as below
- Observe `__file__` to print the module path

A screenshot of a code editor window titled 'file1.py'. The editor contains Python code that imports a module named 'ourlib' and calls two functions, 'sq' and 'sumln', with the argument 5. It also prints the module's path using the '__file__' attribute. The code is as follows:

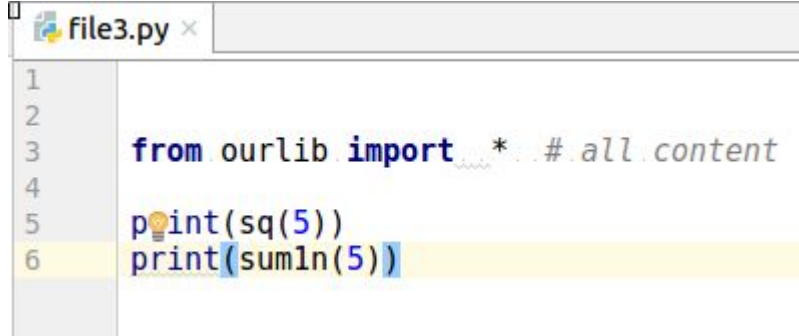
```
1 import ourlib
2
3 print(ourlib.sq(5))      # 25
4 print(ourlib.sumln(5))  # 15
5
6 # ./home/moustafa/workspaces/pycharm/latest/ourlib.py
7 print(ourlib.__file__)
8
```

Using our module from file2.py



```
1
2
3  from ourlib import sq # only sq is visible
4
5
6  print(sq(5))
7
8  # NameError: name 'sumln' is not defined
9  #print(sumln(5))
10
11
12  #NameError: name 'ourlib' is not defined
13  #print(ourlib.__file__)
```

Using our module from file3.py



A screenshot of a code editor window titled "file3.py". The editor shows six lines of Python code. Line 3 is a comment: `# all content`. Line 5 contains `print(sq(5))`. Line 6 contains `print(sumln(5))` and is highlighted in yellow. The code is as follows:

```
1
2
3  from ourlib import * # all content
4
5  print(sq(5))
6  print(sumln(5))
```

Running from line command

- We can run our modules also from CL
- Observe the 2 ways of running the file
 - Make sure to have python visible: `python3 --version`
 - Try it

```
(py) moustafa@moustafa-Aspire-VN7-793G:~/workspaces/pycharm/latest$ python file1.py
25
15
/home/moustafa/workspaces/pycharm/latest/ourlib.py
(py) moustafa@moustafa-Aspire-VN7-793G:~/workspaces/pycharm/latest$ cd ..
(py) moustafa@moustafa-Aspire-VN7-793G:~/workspaces/pycharm$ python file1.py
python: can't open file 'file1.py': [Errno 2] No such file or directory
(py) moustafa@moustafa-Aspire-VN7-793G:~/workspaces/pycharm$ python latest/file1.py
25
15
/home/moustafa/workspaces/pycharm/latest/ourlib.py
(py) moustafa@moustafa-Aspire-VN7-793G:~/workspaces/pycharm$
```

“Acquire knowledge and impart it to the people.”

“Seek knowledge from the Cradle to the Grave.”