

IDLE

- An **integrated development environment (IDE)** is a software that provides facilities to computer programmers – for writing, executing and debugging programs.
 - There are various such programming environments for Python.
- We will use one of the **simplest** programming environments for Python, called **IDLE**. IDLE is mostly suitable for beginners, especially in an educational environment.
- For **large industrial projects**, **IDLE** may be **too simple**. But it is completely adequate for the rather simple programs we (and you) will write in this course.

IDLE

- There are two Python versions: 2 and 3. **We use 3**
 - Python 3 is **not fully compatible** with Python 2.
 - If you use Python 2, your programs will most likely **crash** in our HW execution tests. This will have negative effects on the “wet” part of your homework assignments’ grades, so is best avoided.
- Go to www.python.org
 - Download the latest Python 3 interpreter
 - More instructions on the course website

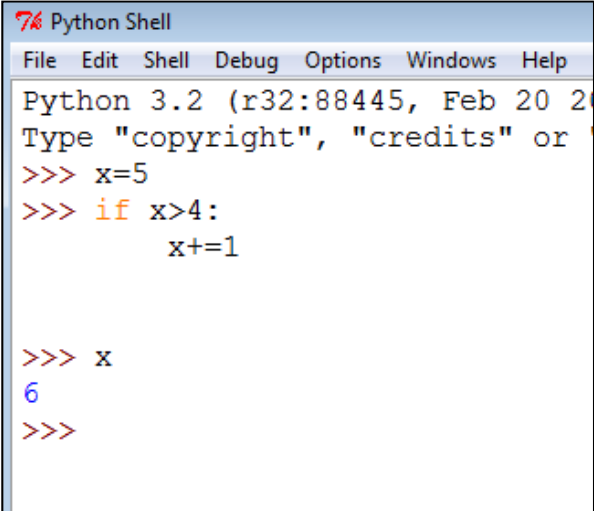
Interactive (shell) mode vs. Script mode

- When we open IDLE we get the **shell** mode, also called **Interactive mode**.

This is a "ping-pong" mode.

we can run a single command at a time.

Very convenient for short computations.

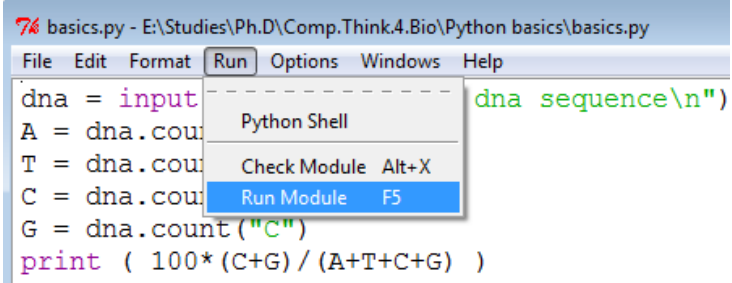


```
Python Shell
File Edit Shell Debug Options Windows Help
Python 3.2 (r32:88445, Feb 20 2006)
Type "copyright", "credits" or "help()" for more help.
>>> x=5
>>> if x>4:
        x+=1
>>> x
6
>>>
```

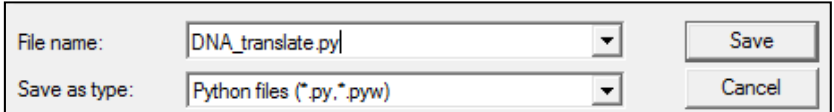
- Script mode** enables **writing** the whole program first, **saving** it in a .py file, and only then **running** it line by line.

To work in script mode:

- 1a. File → New File **OR**
- 1b. right click on an existing .py file → edit
2. Run → Run Module (or F5)



```
basics.py - E:\Studies\Ph.D\Comp.Think.4.Bio\Python basics\basics.py
File Edit Format Run Options Windows Help
dna = input("Enter DNA sequence: ")
A = dna.count("A")
T = dna.count("T")
C = dna.count("C")
G = dna.count("G")
print ( 100*(C+G) / (A+T+C+G) )
```



File name: DNA_translate.py Save

Save as type: Python files (*.py;*.pyw) Cancel