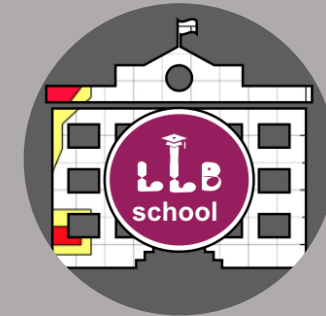


Demystifying Python

Webinar series on Programming
organized by
LLB-School and **CPMB&B, TNAU**



- Instructors -
Mr. Balayogi G.
Mr. Pranavathiyani G.

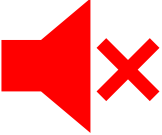






- Groups -
@LetsLearnBioinformatics
@LetsLearnBiotech



- Channels -
@LetsLearnProgramming
@LetsLearnDataScience

Some instructions to participants/viewers

- For **Cisco Webex** participants:  
 - Kindly keep your **microphones** & **video** in **mute/turn off** mode
 - For queries – Use the raise hand option
(or)
 - Post your questions in the chat box  
- For **YouTube** viewers:
 - Post your questions in the **comment** section 

About TODAY!

About last session

- Introduction - Recap

Deep dive

- Basics – Terms & Keywords

Executing programs

- CMD, IDLE, IDEs, Jupyter

Standard libraries

Demonstration

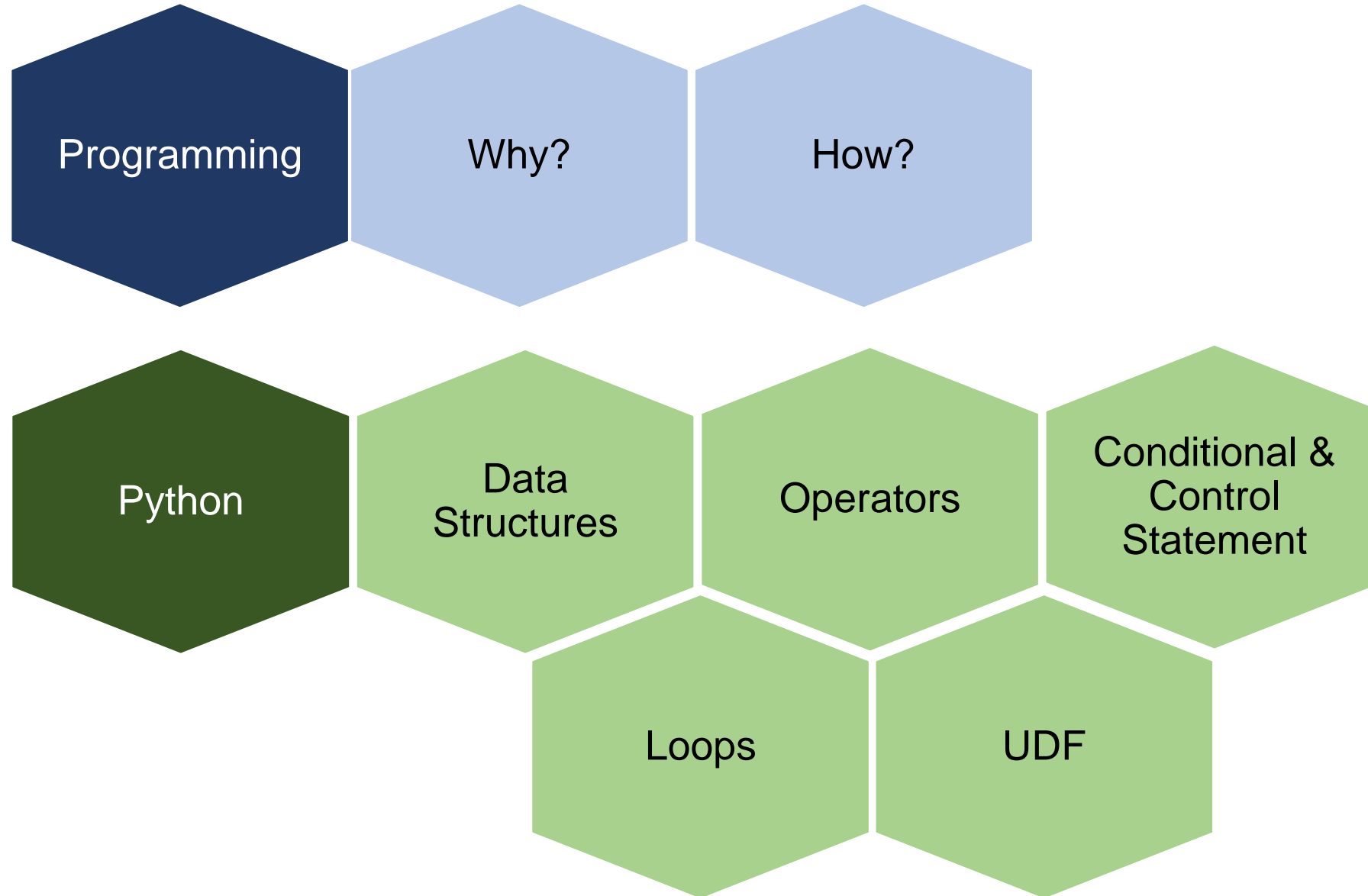


NOT about TODAY!

- Advanced Python programming
- Packages



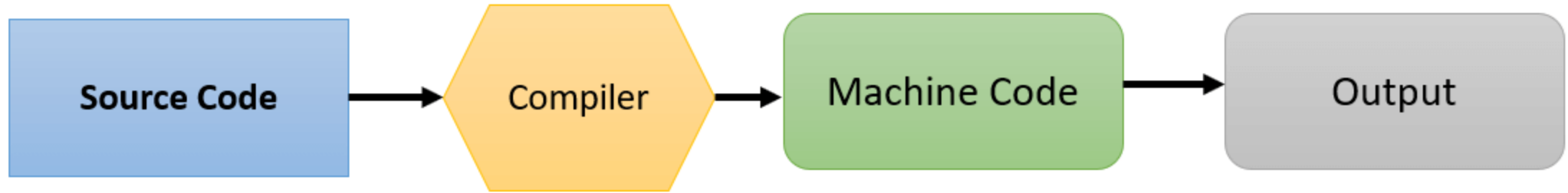
Quick Recap



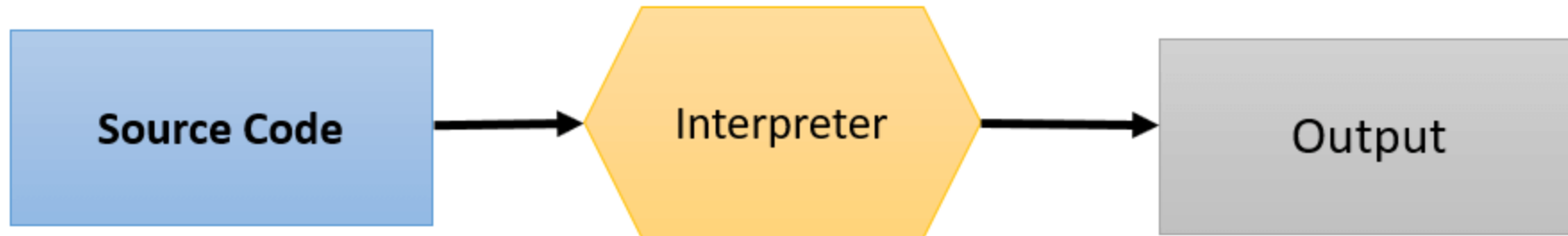
Why Python?



How Compiler Works



How Interpreter Works



Key terms to know while doing programming

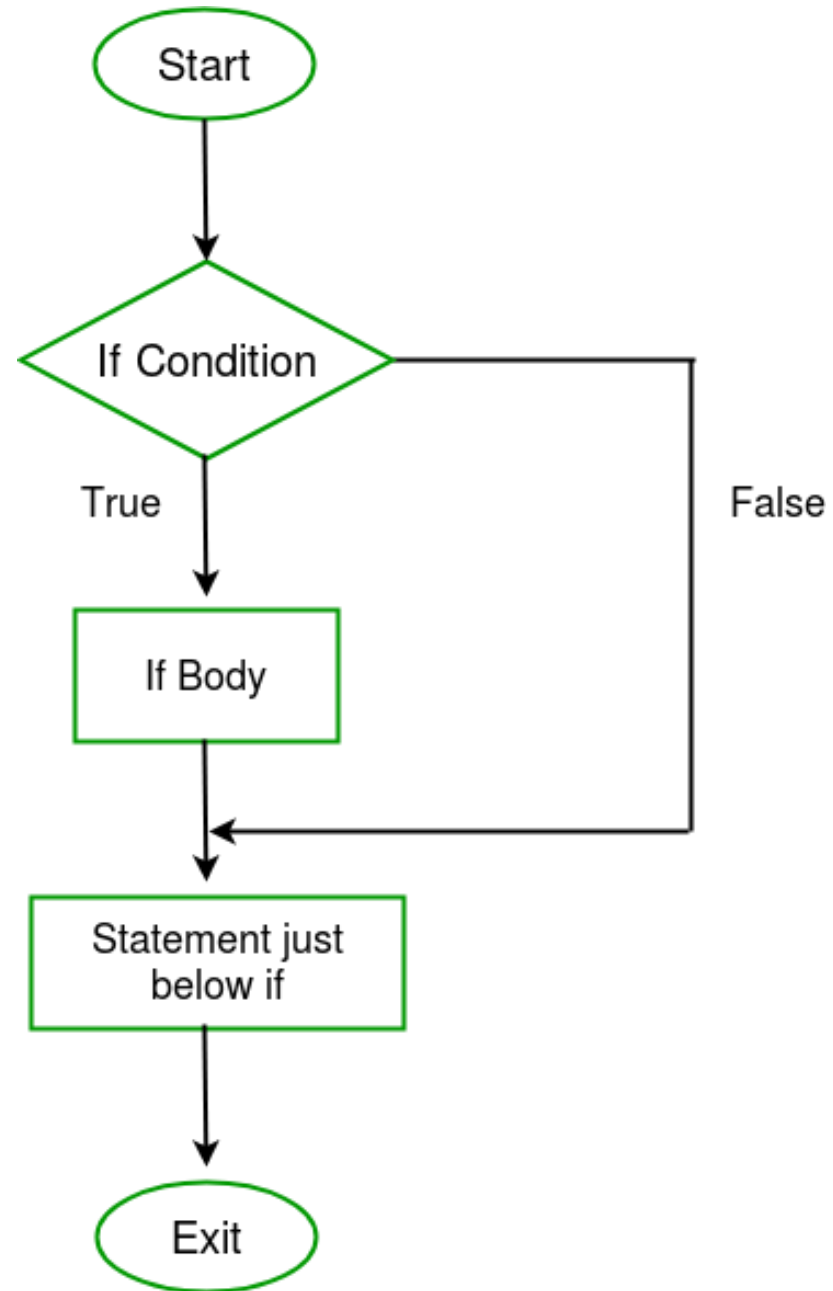
- Keywords – Inbuilt words with fixed meaning
- Variables
- Identifiers - User defined names/words
 - Eg: **Variable** names, function names
- Functions – ()
- Modules/Packages

Data Structures

Data Structure	Ordered	Mutable	Constructor	Example
List	Yes	Yes	[] or list()	[5.7, 4, 'yes', 5.7]
Tuple	Yes	No	() or tuple()	(5.7, 4, 'yes', 5.7)
Set	No	Yes	{ }* or set()	{5.7, 4, 'yes'}
Dictionary	No	No**	{ } or dict()	{'Jun': 75, 'Jul': 89}

Operators

Operator	Meaning	Example
>	Greater than - True if left operand is greater than the right	$a > b$
<	Less than - True if left operand is less than the right	$a < b$
==	Equal to - True if both operands are equal	$a == b$
!=	Not equal to - True if operands are not equal	$a != b$
>=	Greater than or equal to - True if left operand is greater than or equal to the right	$a >= b$
<=	Less than or equal to - True if left operand is less than or equal to the right	$a <= b$



Example

```
frag1 = 'ATGCAATATATA'  
frag2 = 'TGCAT'  
  
l1=len(frag1)  #len() is a function to find length  
l2=len(frag2)  
  
print(frag1+frag2+"\n") #Concatenating fragments  
  
print("Length of Fragement1 is", l1 ,"\nLength of Fragement2 is",l2)  
  
if(l1>l2):  
    print ("\nFragment1 is larger")  
  
else:  
    print ("\nFragment2 is larger")
```

ATGCAATATATATGCAT

Length of Fragement1 is 12

Length of Fragement2 is 5

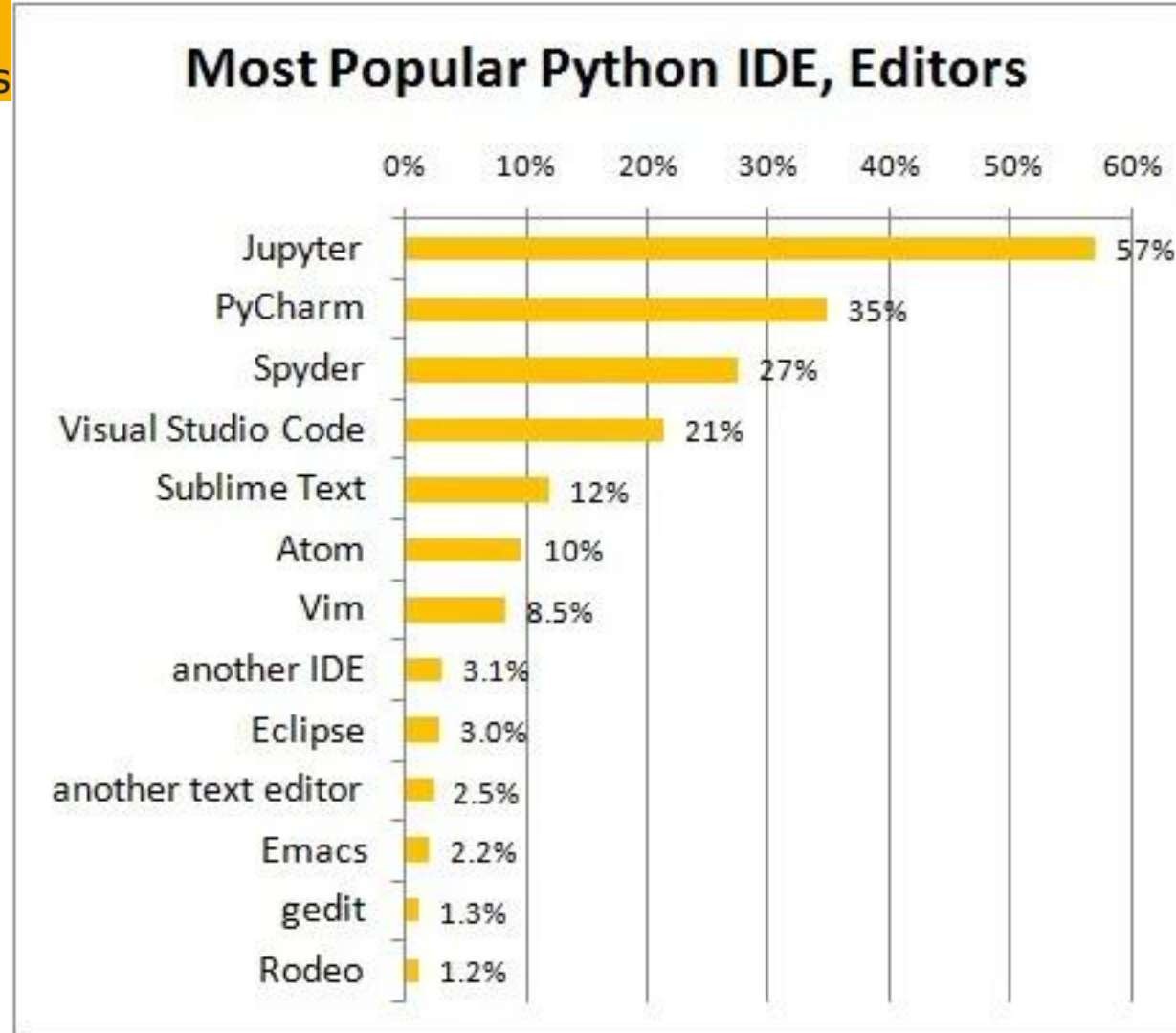
Fragment1 is larger

Output

IDEs – Integrated Development Environment



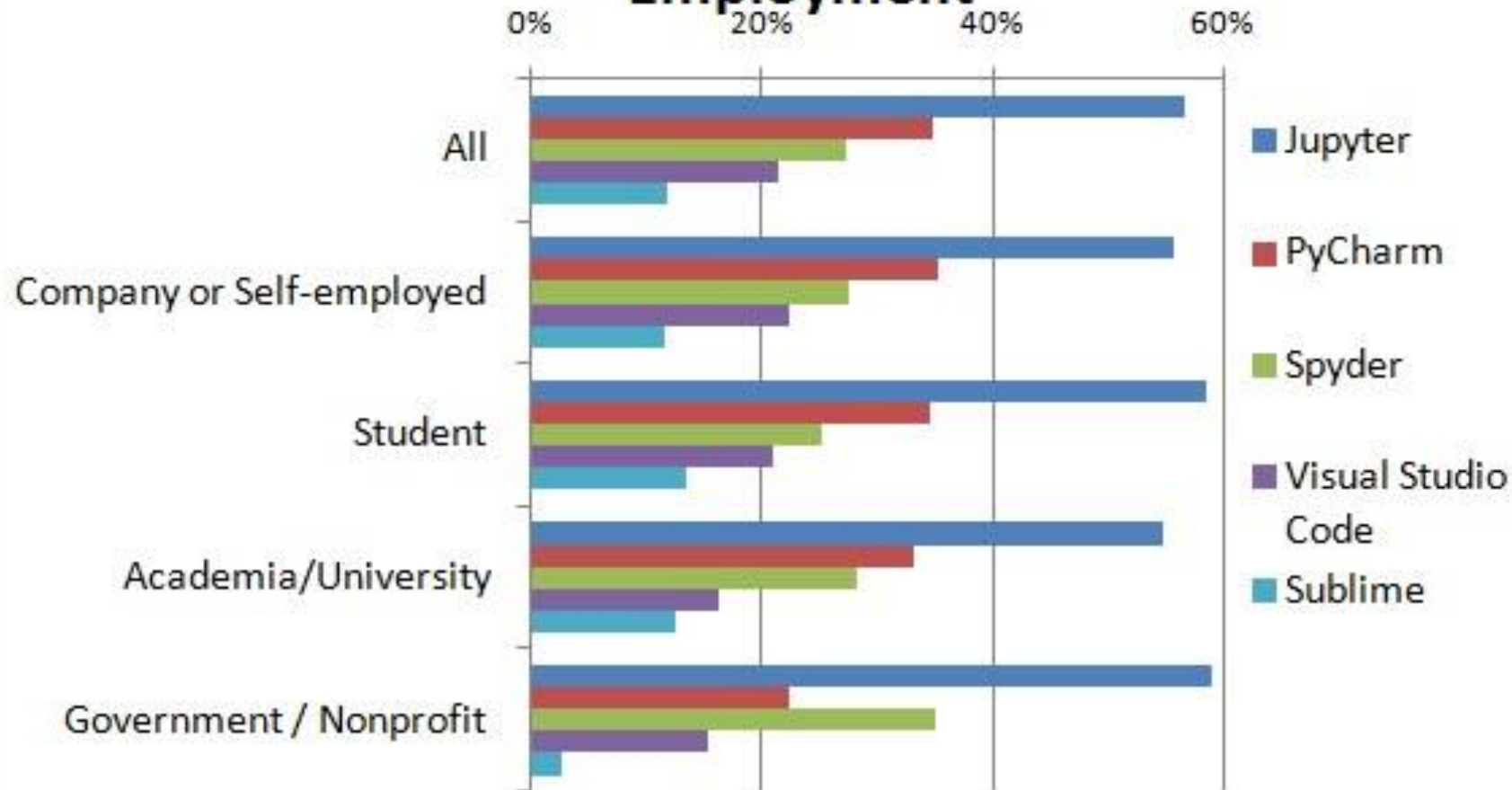
What Python Editors or IDEs you used the most in 2018?



What Python Editors or IDEs you used the most in 2018?



Most Popular Python IDE/Editors by Employment



Let's see them



File handling in Python

Opening
files

01

Reading
from files

02

Writing
to files

03

Adding
to files

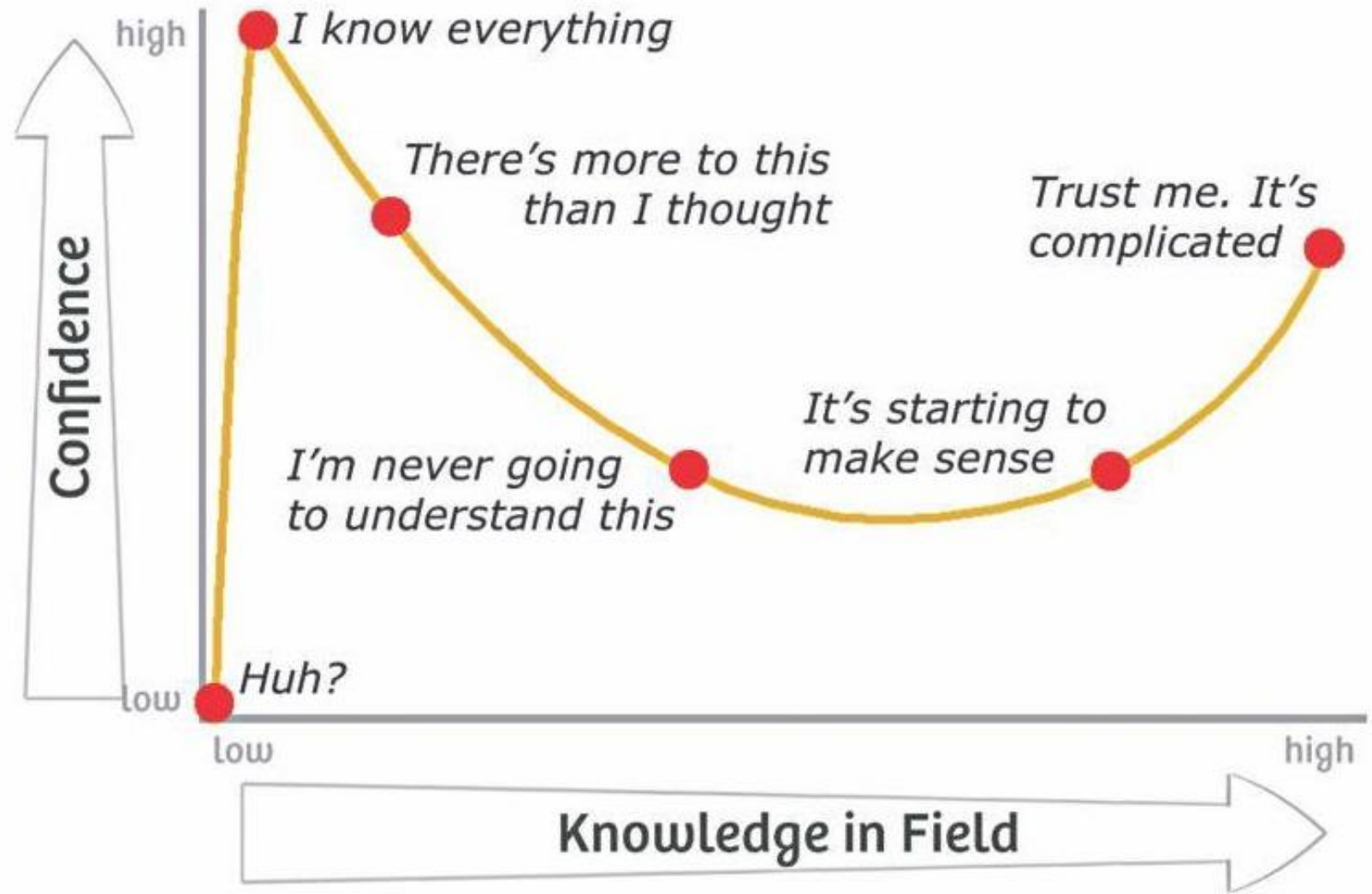
04

Closing
the files

05

**Let's make some file
manipulation**

Dunning-Kruger effect



"The more you know, the less confidence you will get"

Next session: Packages – NumPy, pandas, matplotlib



Thank you

Course updates & discussion: <https://t.me/LetsLearnProgramming>

LLBioinfo: <https://tinyurl.com/LLBioinfo>

LLBiotech: <https://tinyurl.com/LLBiotech>