Introduction to Computer Programming Lecture 6.3:

Intro to the Command Line

Hemma Philamore

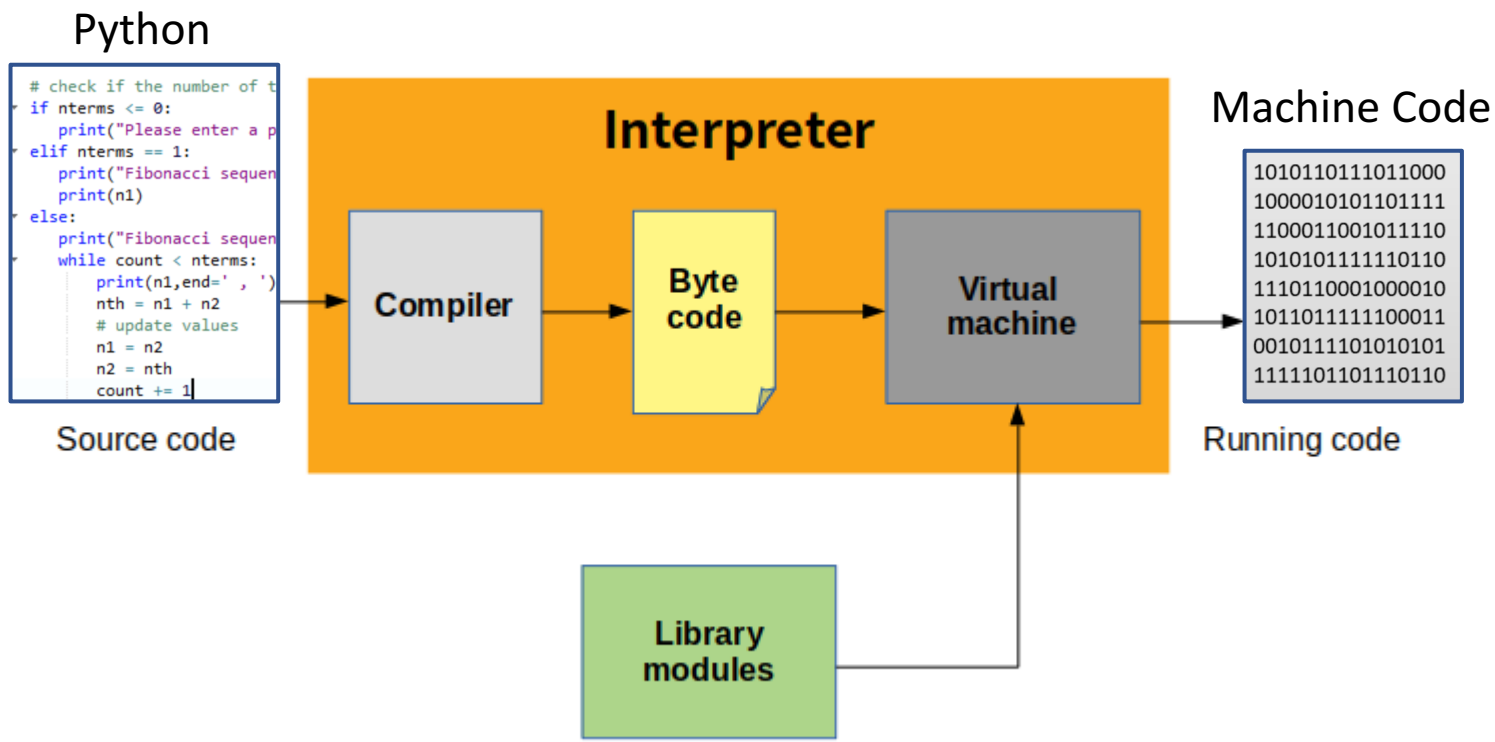
Department of Engineering Mathematics

IDE
(Integrated Development Environment)

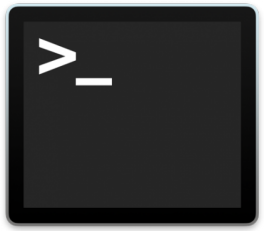
Spyder, PyCharm, Visual Studio Code…

Combining common activities of writing software in a single application:

- **Editing** (syntax highlighting, autocomplete…)
- **Running** (GUI, program & output within same window)
- **Debugging** (hints and warnings)


Python
# check if the number of t
if nterms <= 0:
print("Please enter a p
elif nterms == 1:
print("Fibonacci sequen
print(n1)
else:
print("Fibonacci sequen
while count < nterms:
print(n1,end=' , ')
nth = n1 + n2
# update values
n1 = n2
n2 = nth
count += 1
Source code
Interpreter
Compiler
Byte code
Virtual machine
Library modules
Machine Code
1010110111011000
1000010101101111
1100011001011110
1010101111110110
1110110001000010
1011011111100011
0010111101010101
1111101101110110
Running code

Run python from command line



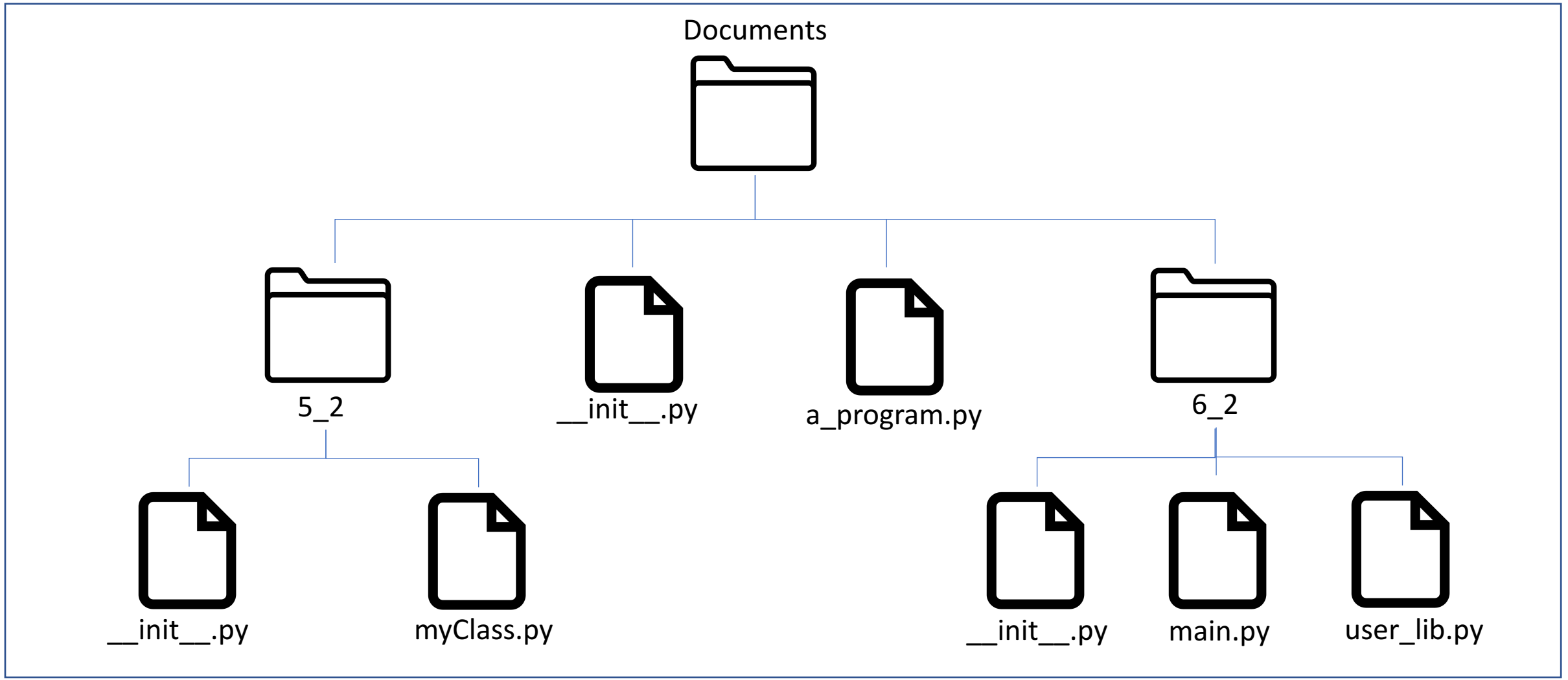
Terminal (Mac, Linux)

Command prompt (Windows)

Change directory: `cd`

Run python: `python` <filename>

remember .py



main.py

```
from user_lib import *

print_a_number()

type_data(2)

A = number
```

user_lib.py

```
number = 2

def print_a_number():
    print(number)

def type_data(data):
    print( type (data) )
```

a_program.py

```
name = input("what's your name?: ")
print(name + " is using the command line")
```

PYTHONPATH:

- environment variable set before running the Python interpreter.
- if it exists, should contain directories that should be searched for modules when using import.
- Use a semicolon/colon (depending on OS) is used to separate multiple directories.

To view a list of directories in the *Python Path:*

Windows
echo %PYTHONPATH%

Mac
echo $PYTHONPATH

Linux
echo $PYTHONPATH

Changes to PYTHONPATH are permanent

Changes to sys.path (Lecture 06-2) last for program runtime

Windows

```
set PYTHONPATH=%PYTHONPATH%;C:\Desktop\folder\sub_folder\
```

Multiple locations separated by ;

Mac & Linux

```
export PYTHONPATH= "$PYTHONPATH:/ Users/Hemma/Desktop/folder/sub_folder"
```

Multiple locations separated by :

Linux

```
export PYTHONPATH= $PYTHONPATH:/ Users/Hemma/Desktop/folder/sub_folder
```

Summary

- **cd <directory name>** : change directory
- **cd ..** : move one directory back in the file system
- **dir (windows) ls (mac, linux)** : view contents of current directory
- **python <filename.py> :** run python programme
- Use tab to autocomplete