

Modules & Packages

In Python

Complex Python Project

... Package N

Functions

Module_1.py

Classes

Functions

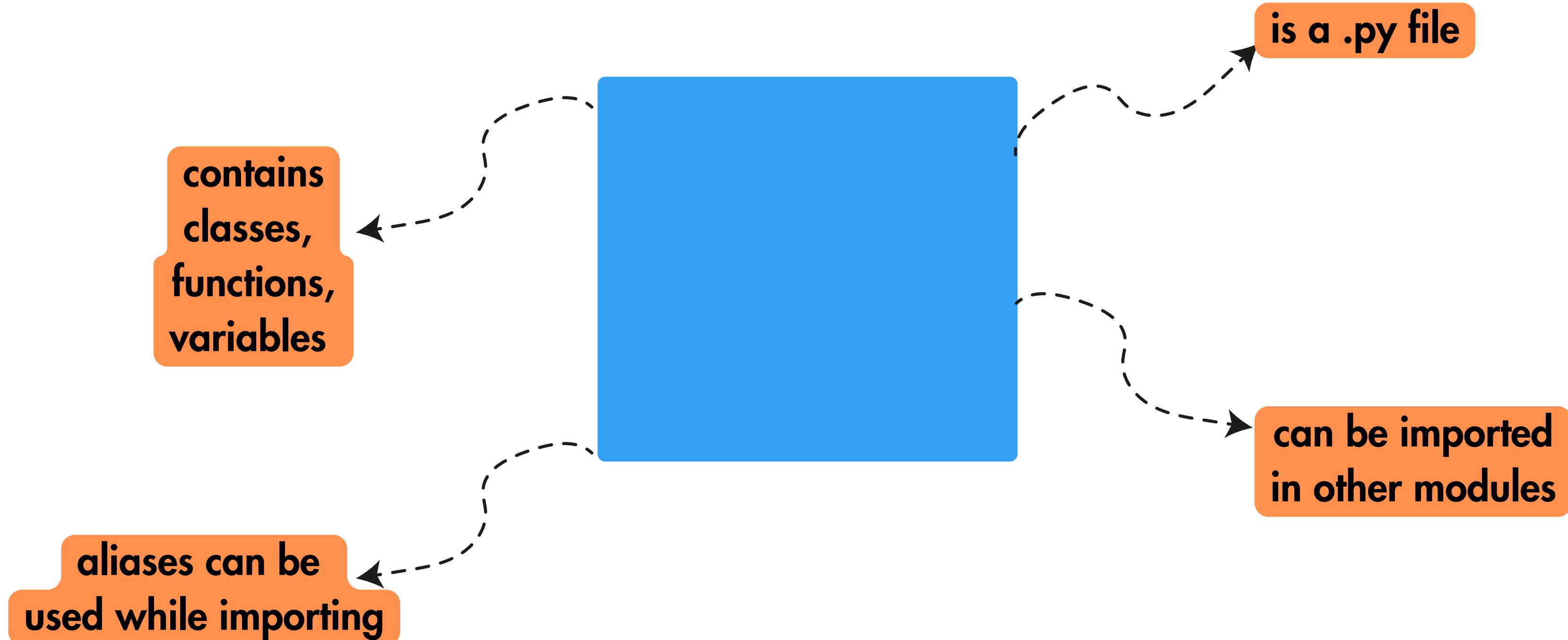
Functions

Module_2.py

Package-2

Package-1

Module in Python?



Before Proceeding . . .

-- **session-9**

-one.py

-two.py

• • •

so on

open vsCode

**create a directory
called session-9**

**Follow exact same
structure to avoid
errors**

Writing your first Module!



```
# filename = hello.py

def hello():
    print("Hello from module")

HELLO = "I am a constant"
RED = "#FF0000"
WEEKDAYS = [ "Su", "Mo", "Tu", "We", "Th", "Fr", "Sa" ]

class Hello:
    def __init__(self):
        print("Class from module initialised")
```

Importing your first Module!



```
# filename = main.py
```

```
import hello
```

```
hello.hello()
```

```
print(hello.RED)
```

```
obj = hello.Hello()
```



Namespace & Aliases

```
# filename = main.py
```

```
import hello
```

```
import hello as hi
```

```
hello.hello()
```

```
hi.hello()
```

using alias

using module namespace

using alias

Both ways are correct, but you can always use aliases to make names easier to remember

Different ways to import!



```
# filename = main.py
```

```
import hello
```

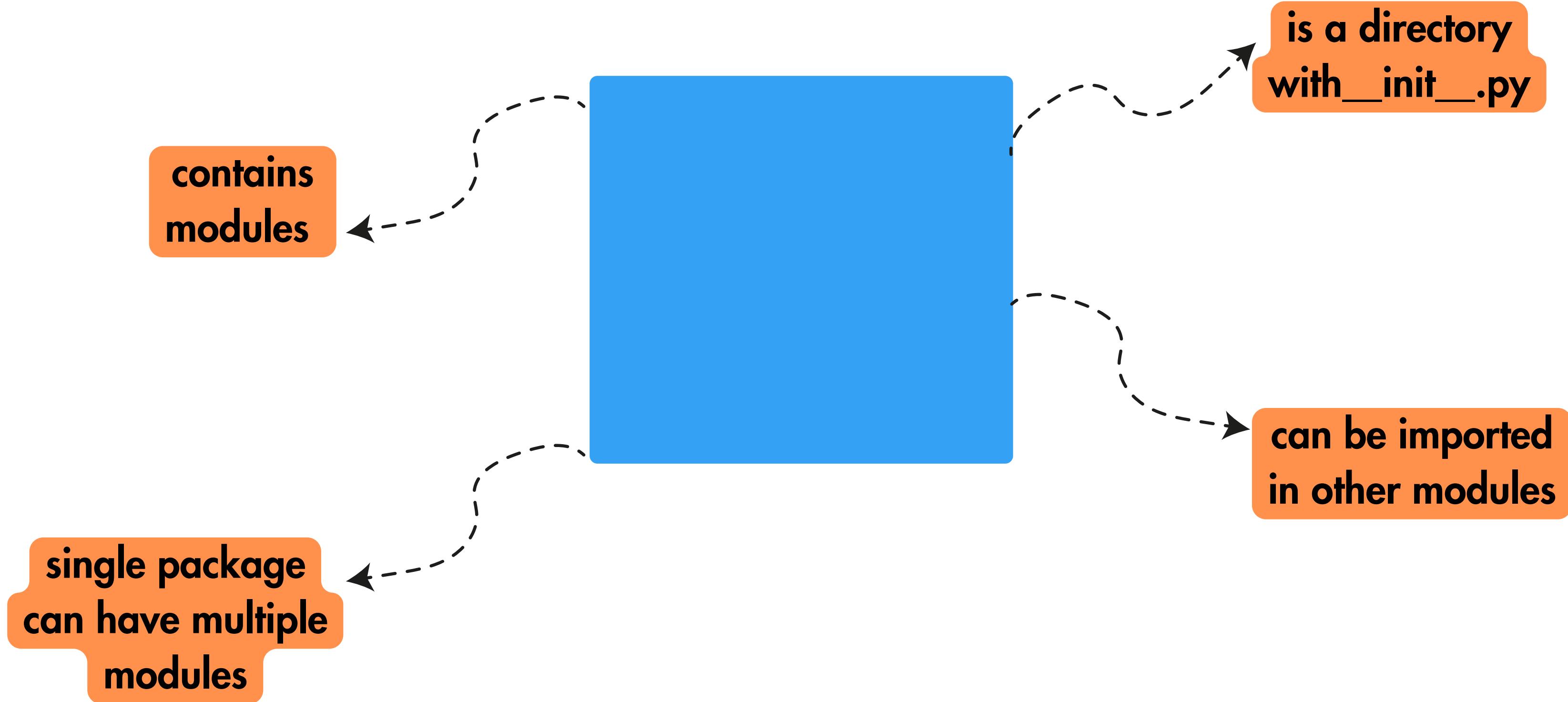
```
from hello import hello
```

```
from hello import RED
```

```
from hello import *
```

All these are valid ways to import selected functionality or all the functionality from a module

Package in Python?



Writing your first Package



directory structure should look like following

package_name

- `__init__.py`

- `one.py`

- `two.py`

- `three.py`

is a dir

individual modules

Importing your Py Package



directory structure should look like following

package_name

- __init__.py
- one.py
- two.py
- three.py

=====

in main.py

from package_name import module_name // this is direct
import

from package_name import * // imports everything

Setting up a package



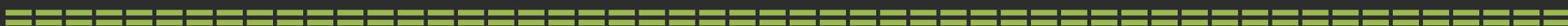
directory structure should look like following

package_name

- `__init__.py`
- `one.py`
- `two.py`
- `three.py`

=====

Install the tools



pip install setuptools wheel



Build the Distribution



`python setup.py sdist bdist_wheel`



Install the package



=====

`pip install dist/<package_name>.tar.gz`



Use the package

```
from package_name import <mod_name>
```

Launch the package



```
pip install twine
```

```
twine upload dist/*
```



Congrats!

Now you know
how to program
in Python!