

The background of the slide features a large, stylized Raspberry Pi logo. It consists of a black raspberry fruit with several green leaves on top. The fruit is composed of many small, pinkish-red segments.

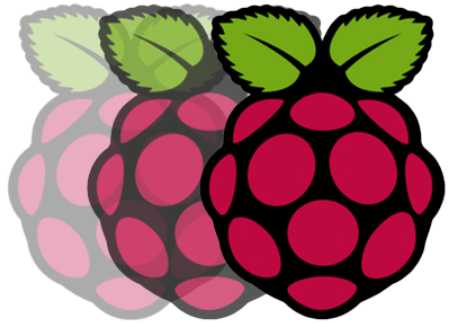
Raspberry Pi

Lesson 8

Going Deeper into Python:

Advanced Python





Contents

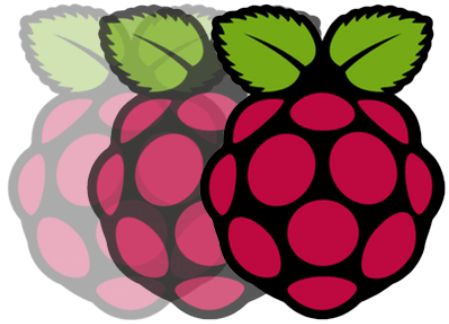
01 **Parts**

02 **Introduction**

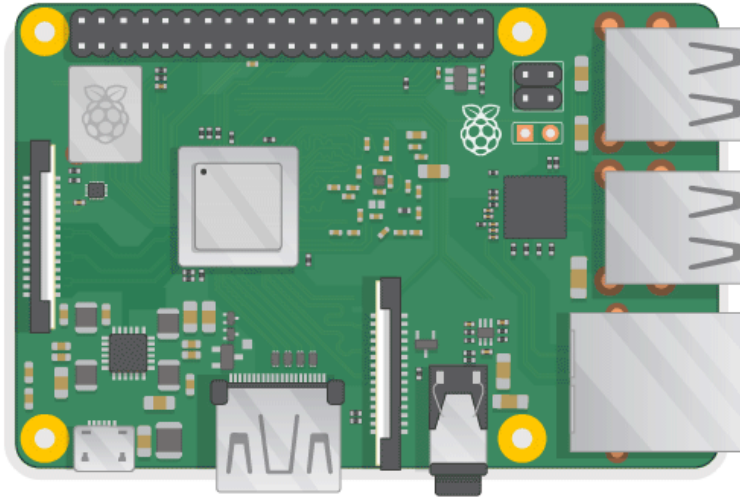
03 **Getting Started: Open Terminal**

04 **More Python**



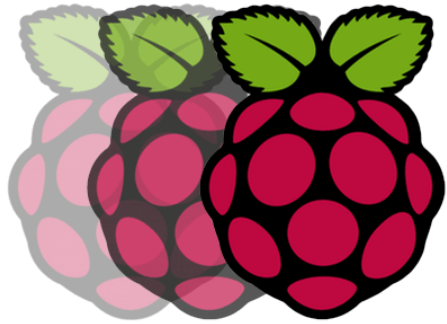


Required Parts



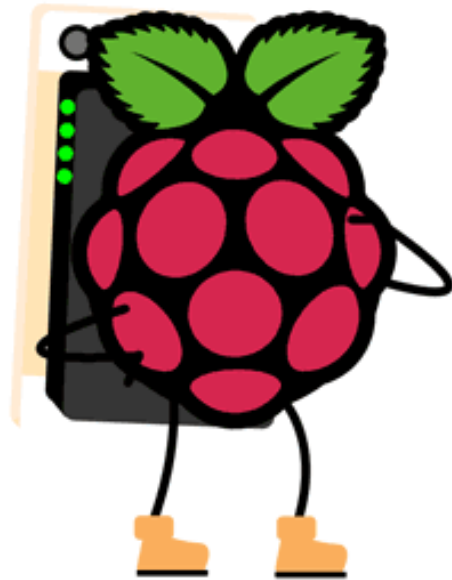
Raspberry Pi Computer

Others: Your Creativity



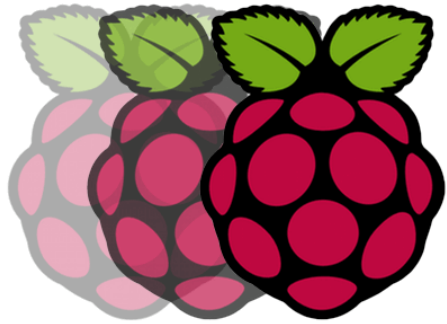
Introduction

Why Python?



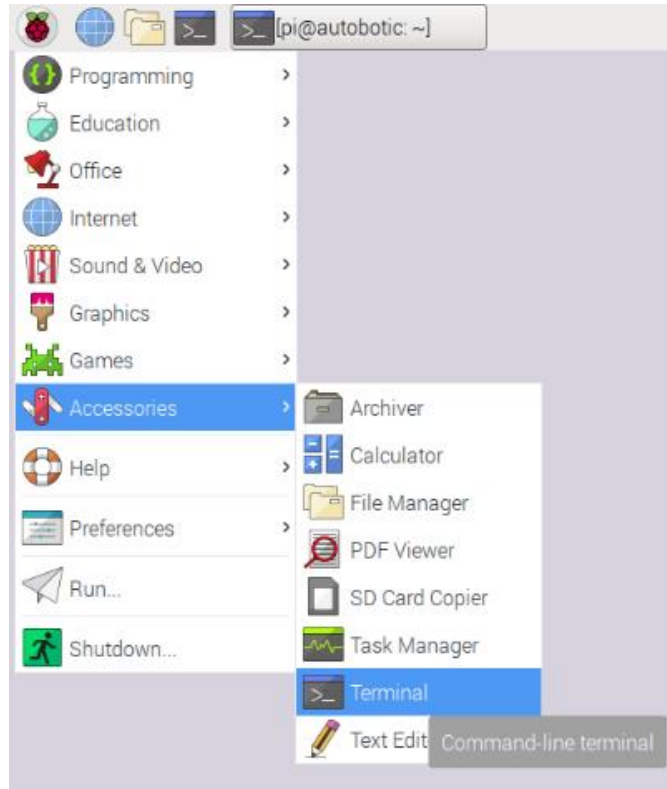
Did you know?

Fact: Pi in Raspberry Pi is inspired by the word
Python



Getting Started

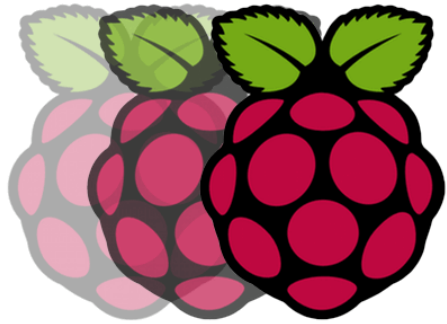
Open Terminal



Using GUI

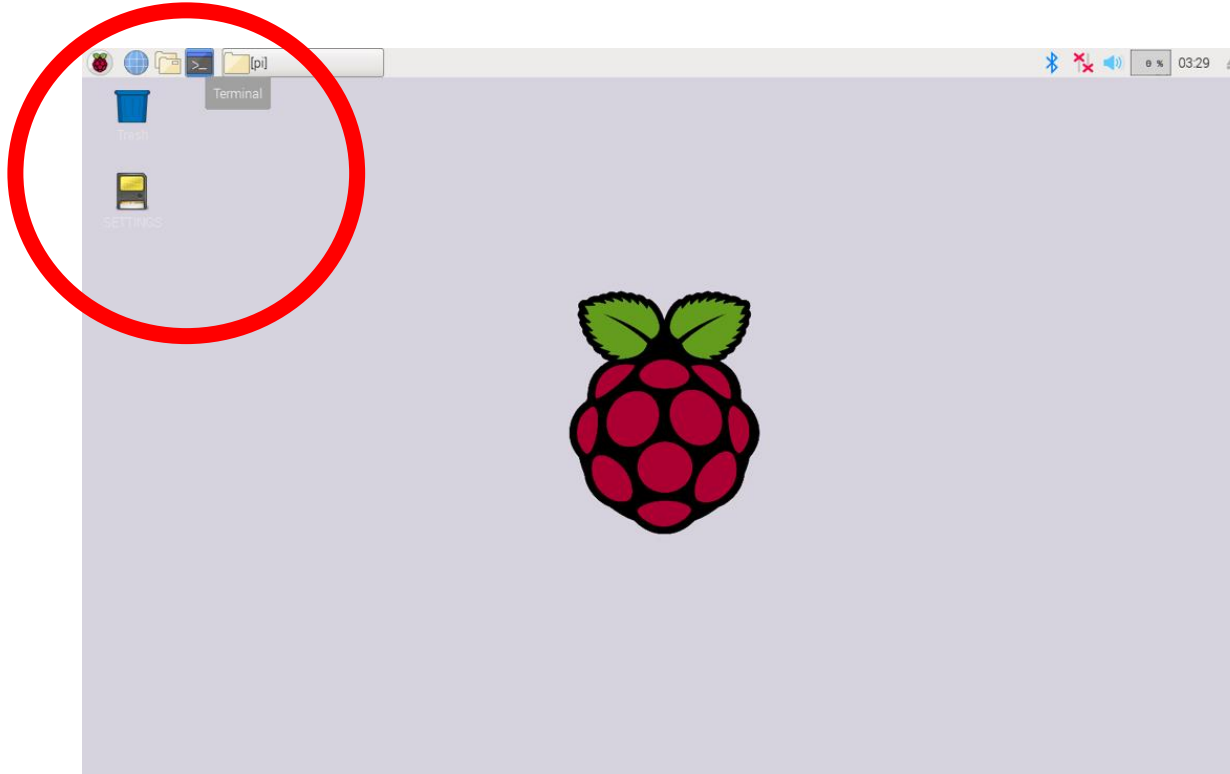
Main menu > Accessories > Terminal



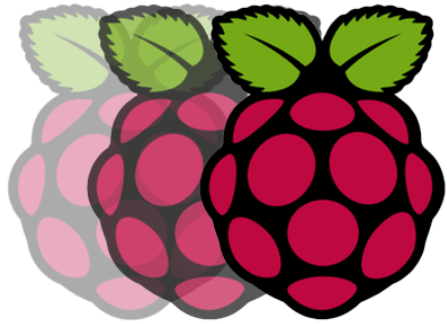


Getting Started

Open Terminal

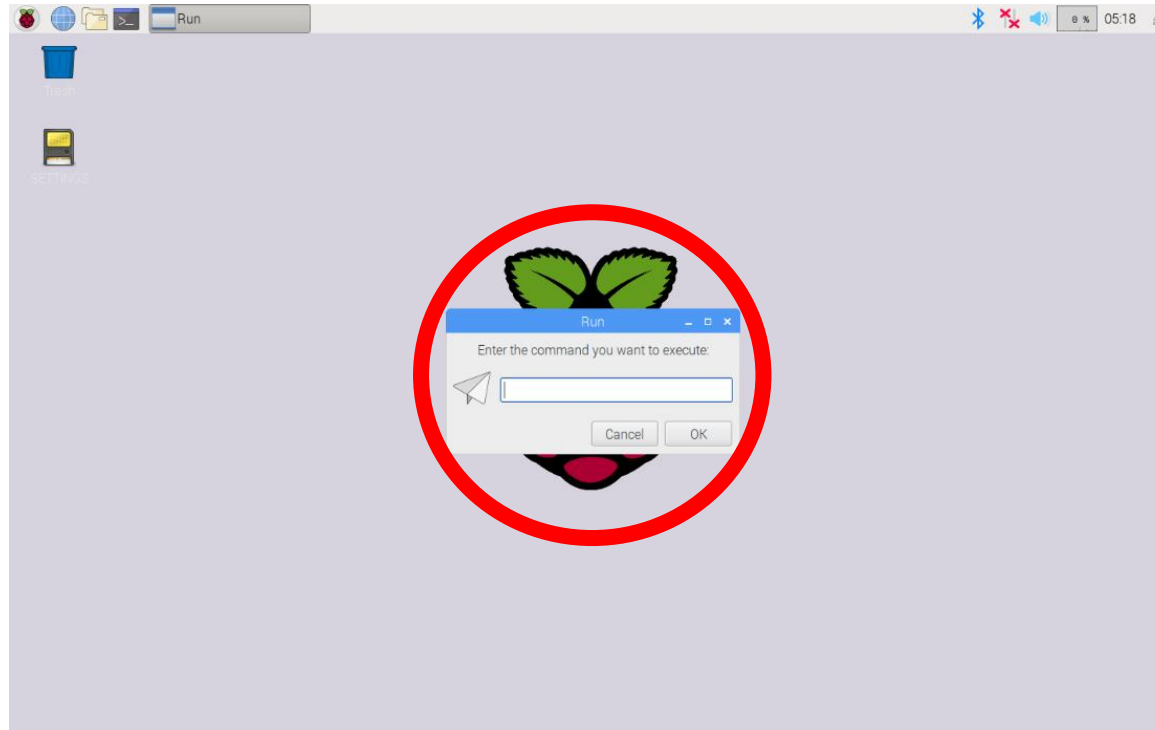


Using GUI
Shortcuts Icon



Getting Started

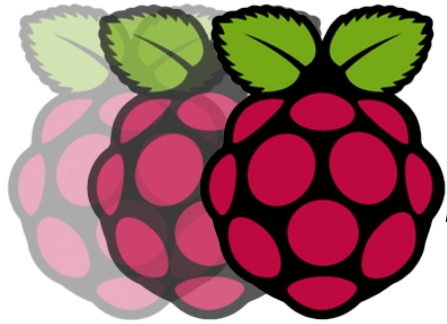
Open Terminal



Using GUI

Alt + F7 > lxterminal





More Python

Formatting Numbers

`{ : 5 . 6 f } . format(x)`

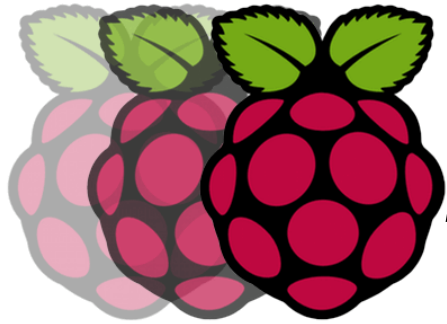
number of digit before floating points

floating points

float data type

converting into certain decimal places





More Python

Formatting Dates

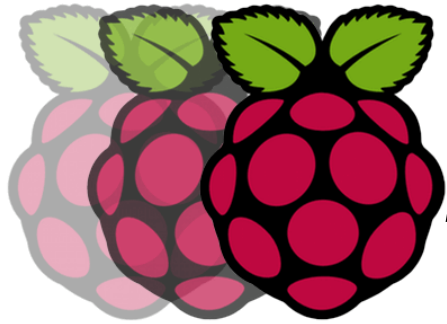
`{%Y-%m-%d %H-%M-%S}.format(x)`

year ← month ← date → hour → month → second

converting date into string

require datetime module





More Python

Return more than one value

```
def func():
```

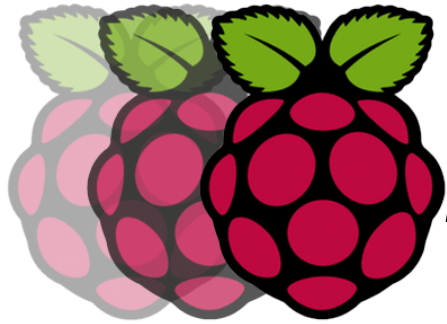
```
    return a, b
```

tuple data return

useful return data

optional





More Python

Defining a class and method

class Class:

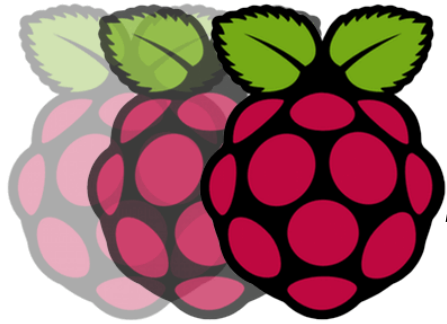
combine
all related
function
under one
hood

```
def __init__(self):  
    pass
```

function

group related method





More Python

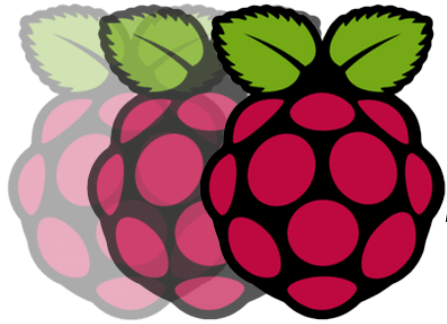
Inheritance

```
class ClassA:  
    def __init__(self):  
        pass
```

```
class ClassB(ClassA):  
    def __init__(self):  
        pass
```

class inside a class





More Python

Writing/Reading text to/from file

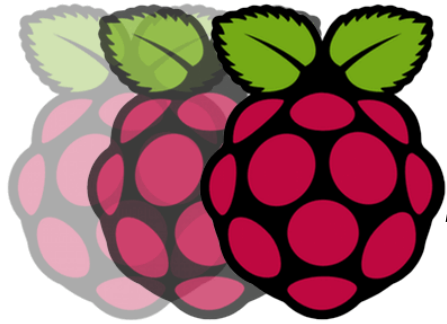
R	Read
W	Write
A	Append
B	Binary
t	Text mode

```
f = open("filename", "w")  
f.write("write text")  
f.close()
```

```
s = f.read("write text")
```

designated for .txt file





More Python

Writing/Reading pickle to/from file

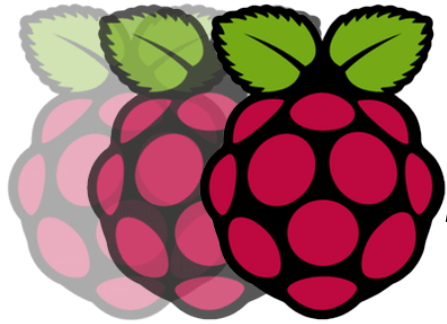
R	Read
W	Write
A	Append
B	Binary
t	Text mode

```
f = open("filename", "wb")  
pickle.dump("write text", f)  
f.close()
```

```
s = pickle.load("write text")
```

designated for .pickle file





More Python

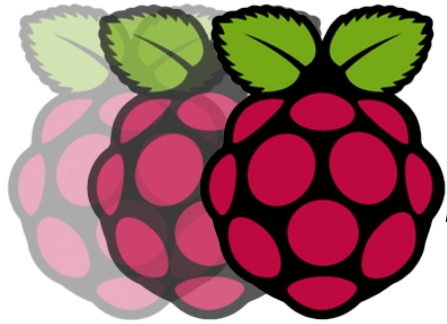
Exception handling

```
try:  
    run_once  
except:  
    catch_err
```

```
try:  
    run_once  
except:  
    catch_err  
else:  
    no_err  
finally:  
    always_run
```

catch the exception (error) and treat well





More Python

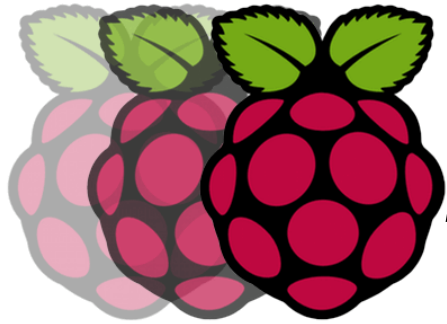
Using module

`import`

importing (libraries) to used in Python code

Python supported with many free libraries





More Python

Using Random module

`import random as R`



`import`

`import random`



`from random import randint`

importing (libraries) to used in Python code

Python supported with many free libraries

