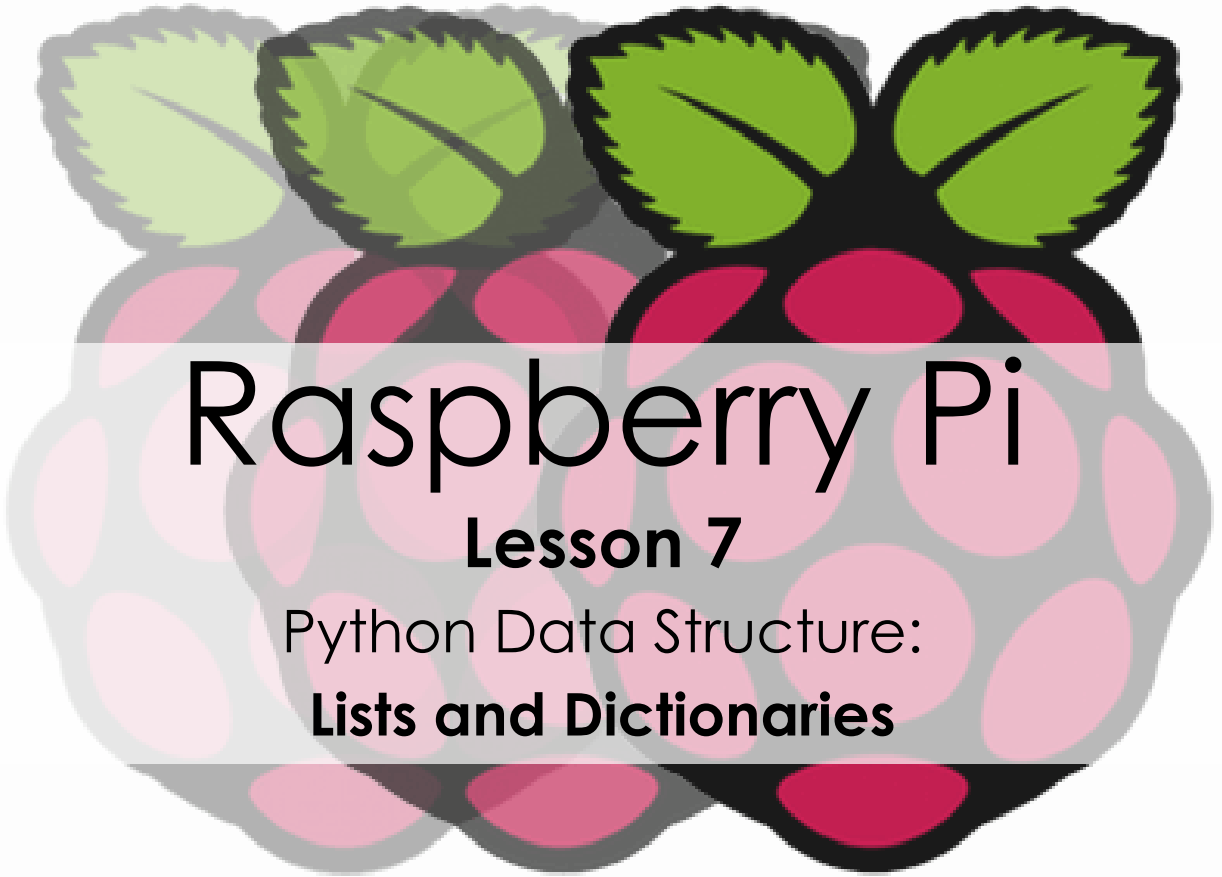

Raspberry Pi

Lesson 7

Python Data Structure:

Lists and Dictionaries

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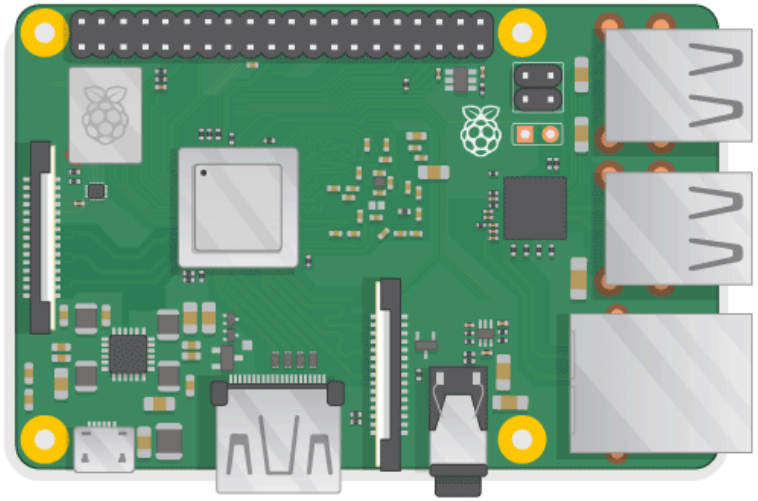
Contents

Required Parts

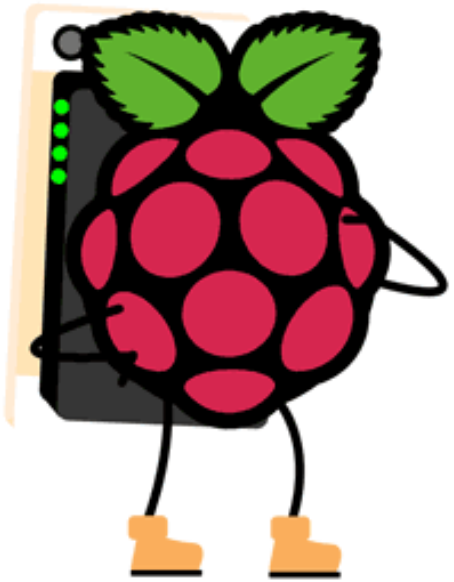


Raspberry Pi Computer

Others: Your Creativity

Introduction

Why Python?



Did you know?

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

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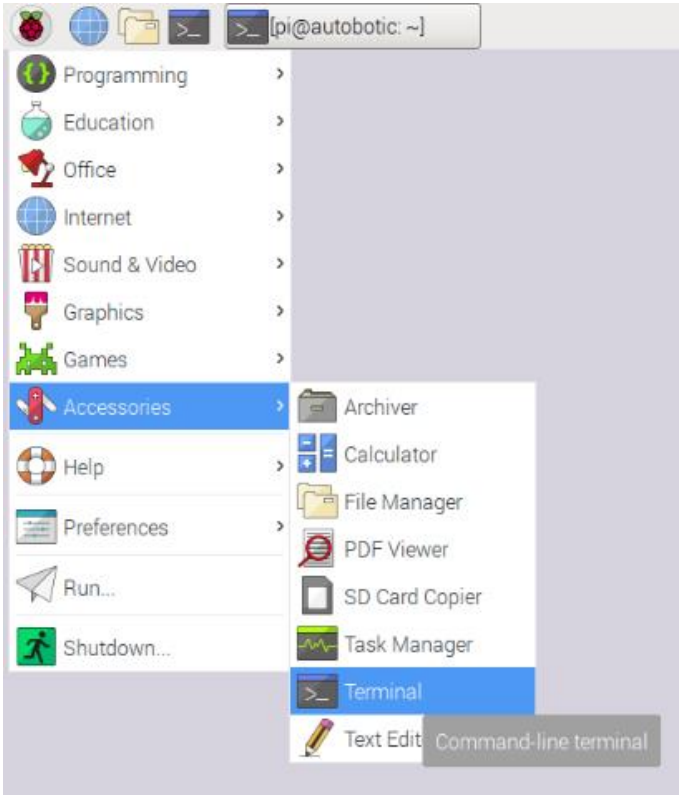
Getting Started

Open Terminal

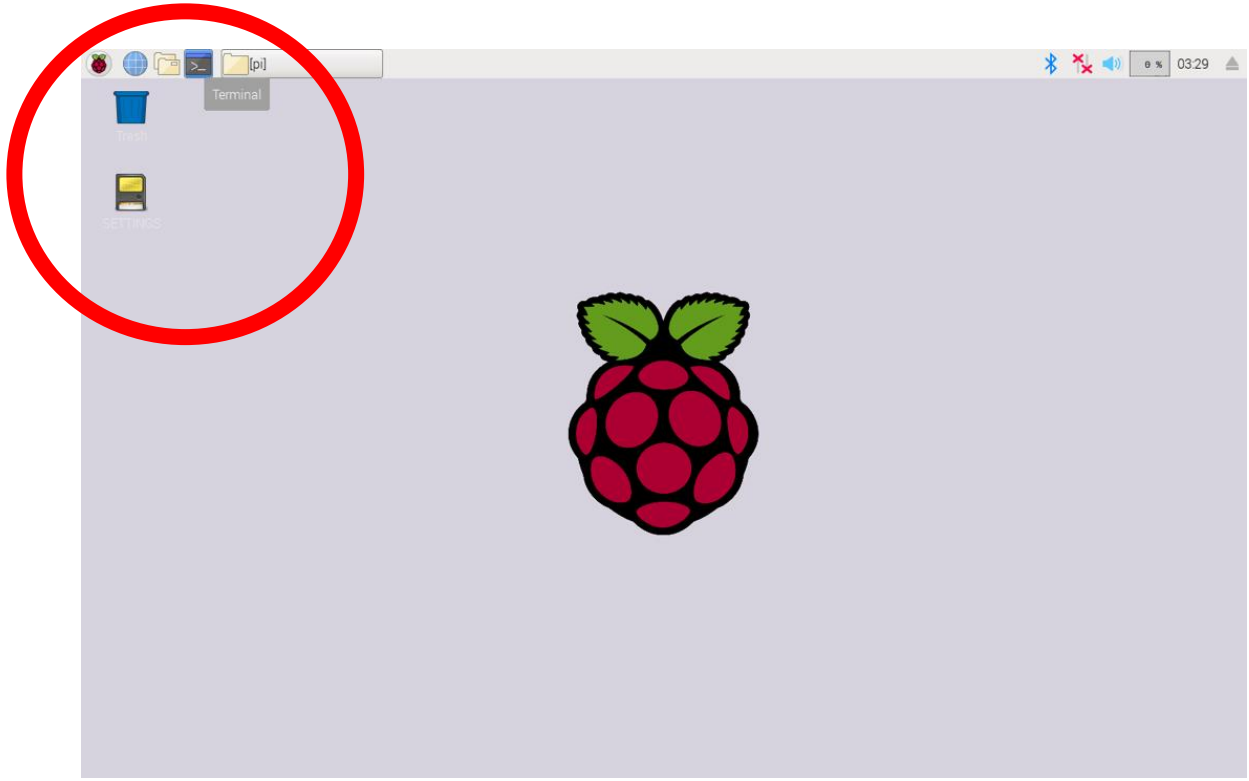


Using GUI

Main menu > Accessories > Terminal

Getting Started

Open Terminal

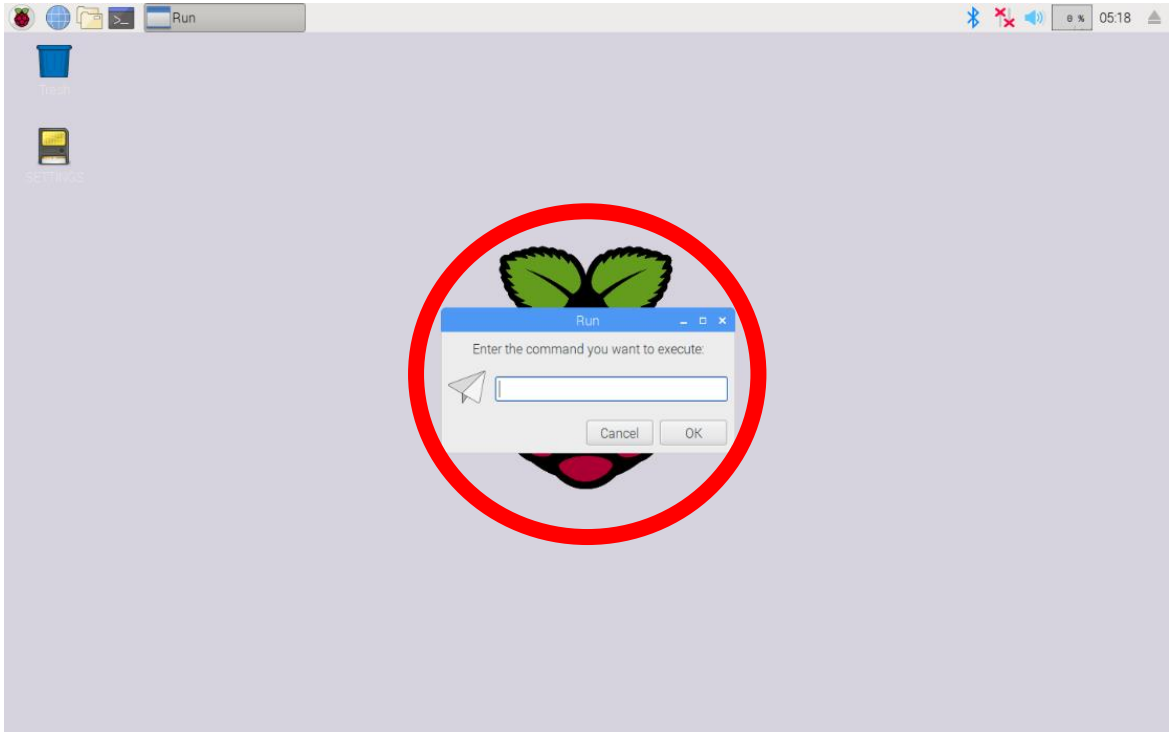


Using GUI

Shortcuts Icon

Getting Started

Open Terminal



Using GUI

Alt + F7 > ltxterminal

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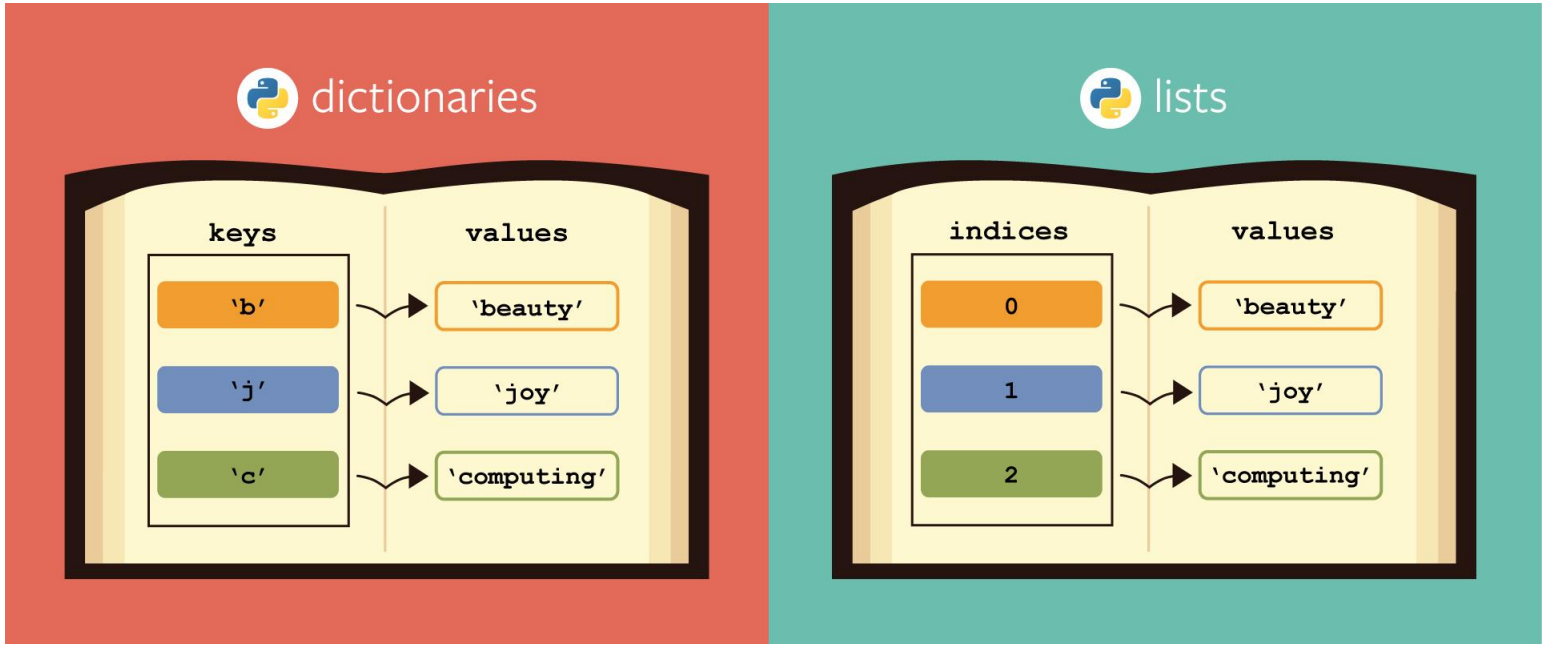
Python Structure



Use variable to hold a series of values

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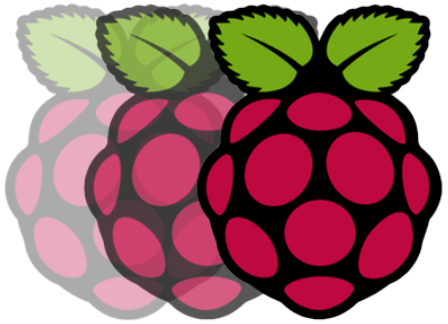

Python Structure

Lists

[“L”, 1, “s”, “T”]

Use variable to hold a series of values in sequence

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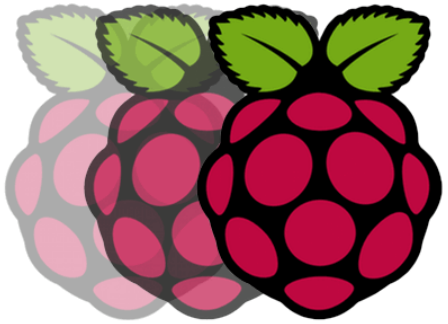

Python Structure

Tuple

(“T”, “u”, “P”, 1, 3)

Use variable to hold a series of values in sequence

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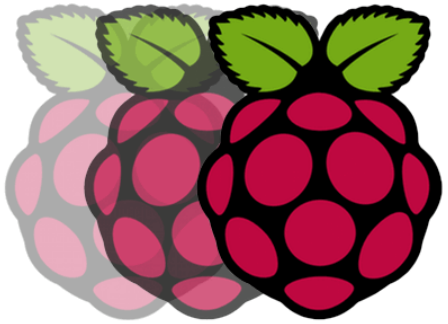
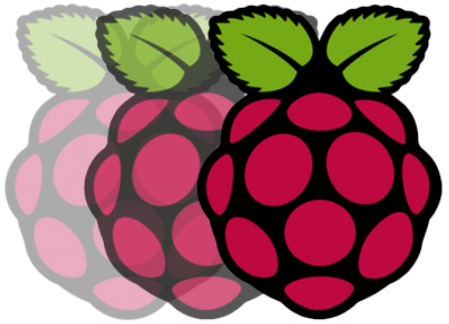


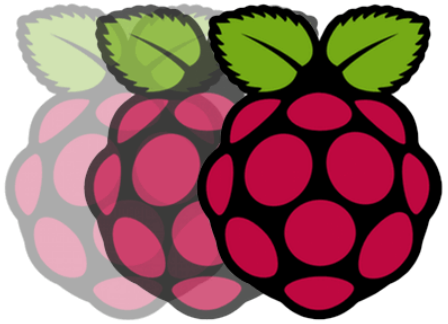
Lists
Accessing

list[index]



Lists
Length

len(list)



Lists

Adding Element

list.append(element)

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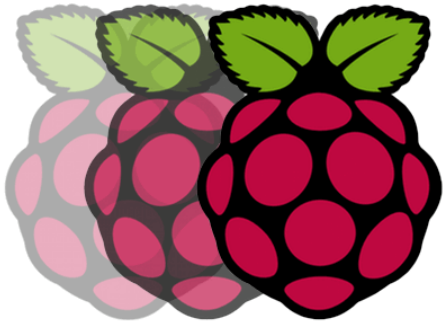
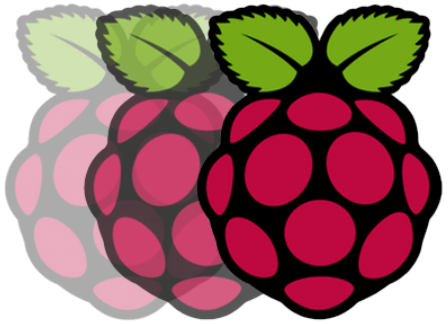


Lists

Remove Element

list.pop(index)



Lists

Create Lists by Parsing String

“abc def ghi”.split()

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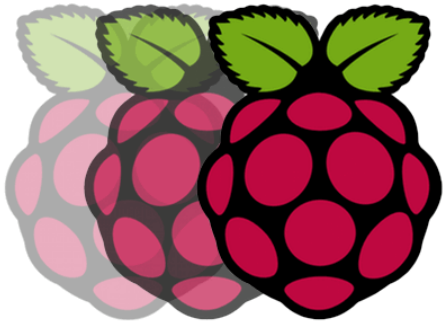
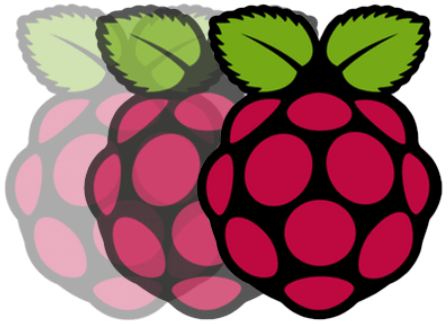


Lists

Iterating over Lists

```
for i in list:
    print(i)
```

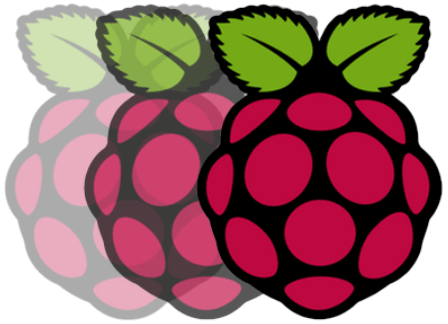


Lists

Enumerate over Lists

```
for (i, x) in enumerate(list):
    print(i)

for i in range(len(list)):
    print(i, list[i])
```



Lists
Sorts

list.sort()

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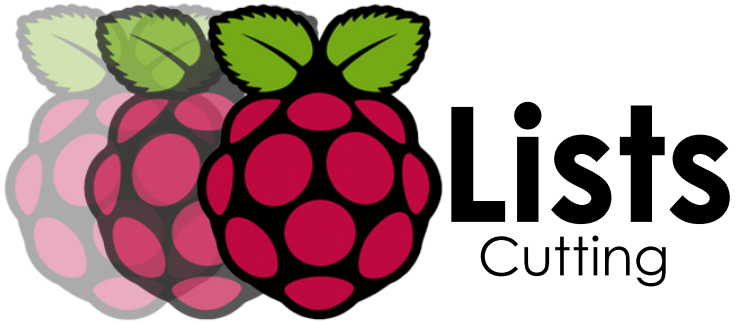

Lists
Cutting

list.[:]

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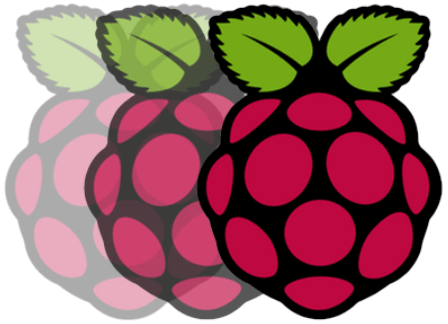
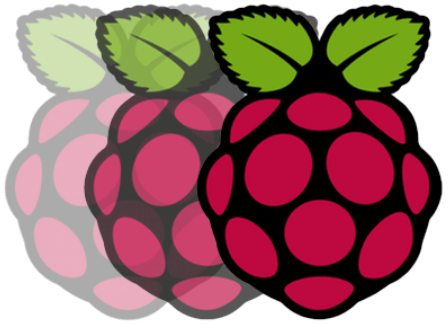


Lists

Applying Function to List

```
[x.upper() for x in list]
```



Python Structure

Dictionary

{ “a”: 1, “s”:“T” }

Use variable to hold a series of values
un-sequential

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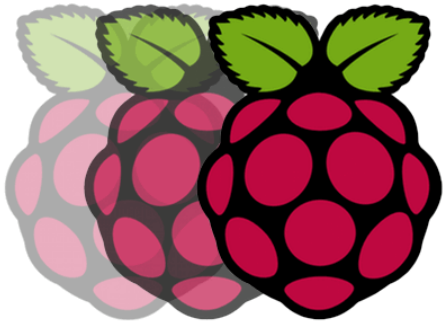

Python Structure

Sets

{ “a”, 1, “s”, “T” }

Use variable to hold a series of values
un-sequential

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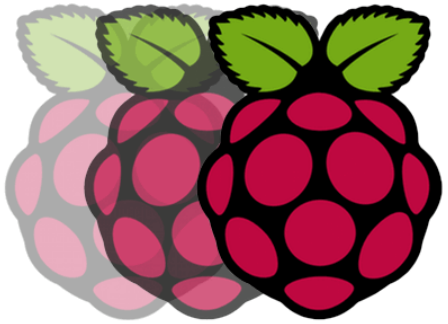
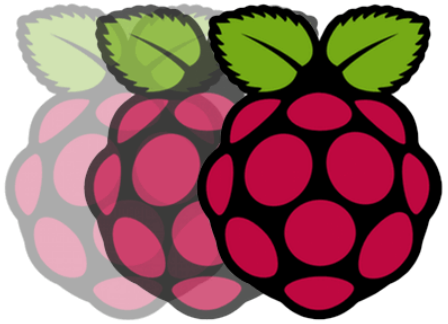


Dictionary

Accessing

dictionary[“key”]

dictionary[“key”] = “pair”



Dictionary

Removing Things

```
dictionary.pop("key")
```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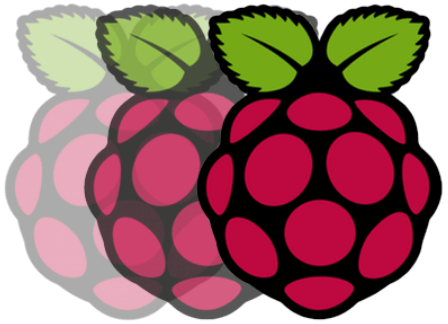

Dictionary

Iterating

```
for (i, x) in dictionary.items():
    print(i, x)
```


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