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| **QA Consulting.** |
| Data Types |
| Exercise Guide 3 |

# Exercise 3.1 – String

Create:

* New folder and move to: **03DataTypes\Exercise**
* New file: **01String.py**

Code a program that:

* Sets three variables to the words “Good”, “Day” and “your name”
* “Adds” them together, with a space between each word, into another variable
* Prints out that variable

Save and run.

# Exercise 3.2 – Number

Create:

* New file: **02Number.py**

Code a program that:

* Sets two variables to the names of two animals
* Calculates which name is the first alphabetically
* Outputs a message to show which word comes before or after the other

Save and run.

# Exercise 3.3 – Boolean

Create:

* New file: **03Boolean.py**

Code a program that:

* Sets two variables to the names of two animals
* Calculates which name is the first alphabetically
* Outputs a message to show which word comes before or after the other

Save and run.

## Exercise 3.4 – List

Create:

* New file: **04Listpy**

Code a program that:

* Creates a list of three fruits:
  + Outputs all the fruits in the list
  + Outputs the second fruit in the list
* Creates a set of three fruits:
  + Outputs all the fruits in the set
  + Adds a new fruit to the set
  + Outputs all the fruits in the set
  + Tries to add a repeat of a fruit to the set
  + Outputs all the fruits in the set
* Creates a dictionary of three fruits with a corresponding price:
  + Outputs all the fruits in the dictionary
  + Outputs the price of the second fruit in the dictionary
  + For a given fruit output its price if it is the dictionary or a message if it is not

Save and run.

# Solutions

## Solution 3.1 – String

# Name: 01String

# Author: John Merchant

# Date: 11 Jul 2016

# Purpose: Exercise to add strings

word1= "Good"

word2= "Day"

word3= "John"

sentence= word1 + " " + word2 + " " +word3

print(sentence)

## Solution 3.2 – Number

# Name : 02Number

# Author : John Merchant

# Date : 11 Jul 2016

# Purpose : Exercise to divide one number by another

from decimal import \*

number1 = 31

number2 = 19

print("31 / 19 =", int(number1 / number2))

print("31 / 19 =", float(number1 / number2))

print("31 / 19 =", Decimal(number1 / number2))

## Solution 3.3 – Boolean

# Name : 03Boolean

# Author : John Merchant

# Date : 03 May 2016

# Purpose : Exercise to calculate alphabetical order of two words

word1 = "cat"

word2 = "dog"

if word1 < word2:

word1first = True

else:

word1first = False

if word1first:

print(word1 + " comes before " + word2)

else:

print(word1 + " comes after " + word2)

## Solution 3.4 – List

# Name : 04List

# Author : John Merchant

# Date : 11 Jul 2016

# Purpose : Exercise of lists, sets and dictionary

fruit = ["apple","banana","cranberry"]

print(fruit)

print(fruit[1])

fruit = {"apple","banana","cranberry"}

print(fruit)

fruit.add("date")

print(fruit)

fruit.add("banana")

print(fruit)

fruit = {}

fruit["apple"] = 25

fruit["banana"] = 20

fruit["cranberry"] = 1

print(fruit)

print(fruit["apple"])

if "apple" in fruit:

print(fruit["apple"])

else:

print("Not specified")