

VARIABLES, FUNCTIONS AND LISTS

DAY TWO

PROJECT INCLUDE ALBION BOOTCAMP

REVIEW

WHAT IS COMPUTER SCIENCE?

WHAT IS SYNTAX?

DOES EVERYONE REMEMBER “HELLO WORLD”?

DATA TYPES

In programming, you will always have to deal with different data types because **COMPUTERS ARE STUPID.**

These are some data types:

- Strings
- Integer
- Floats

VARIABLES

Variables store information (in a data type) that can be used later.

```
variable = "Some information"
```



INPUT

Ask for user input using:

```
variable = input("Question? ")
```

MATH ON COMPUTERS

You can do math operations in programming. In python, we may use different symbols to represent operations:

Add: $1 + 1$

Subtract: $2 - 1$

Multiply: $5 * 5$

Divide: $6 / 2$

FUNCTIONS

A function is a block of code that takes in inputs (parameters) and outputs something (return or print).

A function in python:

```
def function_name(parameter1, parameter2):  
    ...  
    return _____
```

BUILD A FUNCTION

Time to get your hands dirty! Build a function that takes in the inputs of the underlined and returns the result.

Addition: A + B

Subtraction: A - B

Multiplication: A x B

Division: A divide B

Area of a triangle: base x height x 0.5

Celsius to Fahrenheit: celsius x 1.8 + 32

BREAK TIME

LISTS

A list is a group of items. Each item in the list has an **index**.

Syntax of a List:

```
[1, 2, 3, 4, 'string']
```

Syntax of calling an item in a variable that contains a List:

```
varlist[index]
```

LISTS ACTIVITY

Time to rumble!

Create a list of colours and print your favourite one using the index of a list

USING A LIST TO REPRESENT A TIC TAC TOE BOARD

You will be building a Tic Tac Toe game for your final project!

We will explain how to represent a Tic Tac Toe board using a list on the board.

WE NEED YOUR
FEEDBACK

DAY TWO COMPLETE
SEE YOU TOMORROW!