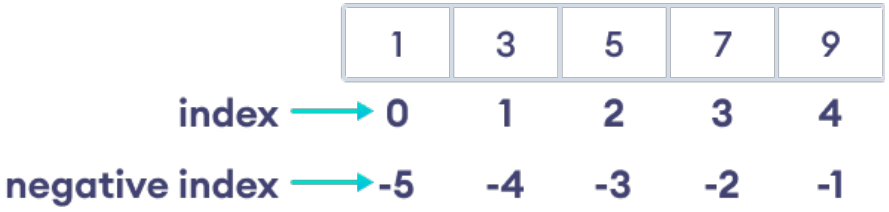
Spotted Python

Week 3 Tutorial

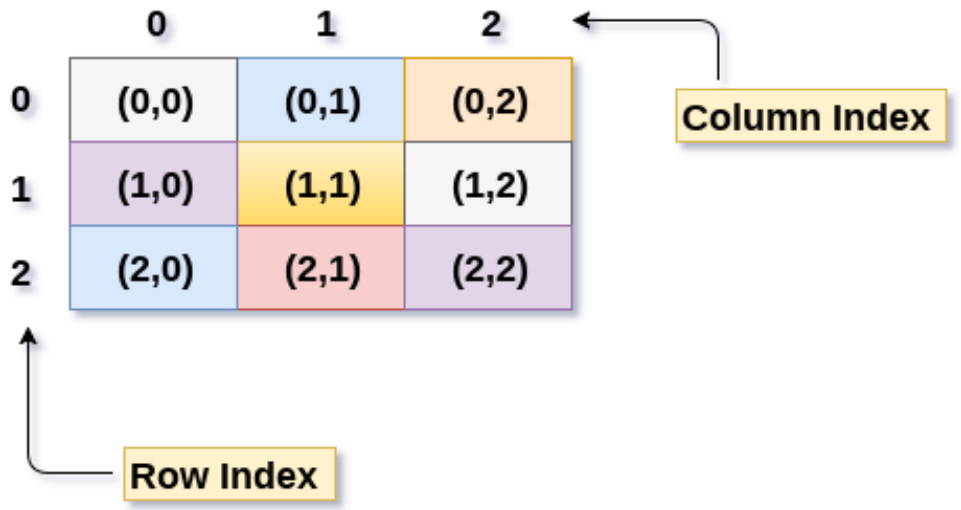
- Lists and Arrays
- Functions
- Logical Statements
- Simple Graphing

Lists and Arrays

- https://github.com/mithebell/PHYS3116
- Lists are a sequence of objects enclosed in [ ] and separated by commas
- Arrays are an arrangement of numbers or objects formatted into rows and columns
- Indexing:



Notice that indexing starts from 0



- Complete **Exercise 1**

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Functions

- A set of instructions that will be repeated
- Code written for a specific task. For example, calculating the gravitational acceleration
- Complete **Exercise 2**

Logical and if-else Statements

- Python can evaluate logical statements
- *==, >=, <=, !=, >, <*
- *if* statement executes a block of code (indented) if the given condition is True
- *else* statement executes a different block of code, if the if condition is False
- *elif* statement allows the execution of multiple conditions in sequence
- Complete **Exercise 3**

Simple Graphing

- Matplotlib is the most used tool for visualisation
- Documentation: https://matplotlib.org/stable/
- List of in-built colours: https://matplotlib.org/stable/gallery/color/named_colors.html
- List of in-built colourmaps: https://matplotlib.org/stable/users/explain/colors/colormaps.html
- Module to import alternative colourmaps: https://cmasher.readthedocs.io/index.html
- Tool to create colourmap: https://gka.github.io/palettes

Group Meeting Time

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