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# Algorithm Development & Python Programming

Workshop Day - 6

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# Day 06 Content

| Day 5 Recap | List | Tuple | Dictionary | Activities |
|---|---|---|---|---|

- Insert Data
- Alter Data
- Remove Data
- Retrieve Data

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# Day 5 Recap
## 5 දින සාරාංශය

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# Python List
## පයිතන් ලැයිස්තු

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# Python List

- Lists are used to store multiple items in a single variable.

- Lists are one of 4 built-in data types in Python used to store collections of data, the other 3 are Tuple, Set, and Dictionary, all with different qualities and usage.

- Lists are created using square brackets

- List items are **ordered, changeable, and allow duplicate values.**

- List items are indexed, the first item has index [0], the second item has index [1] etc.

- Changeable

- Allow Duplicates

```python
thislist = ["apple", "banana", "cherry"]
print(thislist)
```

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# Python Tuples

- Tuples are used to store multiple items in a single variable.
- Tuple is one of 4 built-in data types in Python used to store collections of data, the other 3 are List, Set, and Dictionary, all with different qualities and usage.
- **A tuple is a collection which is ordered and unchangeable, allow duplicates.**
- Tuples are written with round brackets.

```
thistuple = ("apple", "banana", "cherry")
print(thistuple)
```

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# Python Sets

- Sets are used to store multiple items in a single variable.
- Set is one of 4 built-in data types in Python used to store collections of data, the other 3 are List, Tuple, and Dictionary, all with different qualities and usage.
- A set is a collection which is both unordered and unindexed.
- Sets are written with curly brackets.
- **Sets are unordered, so you cannot be sure in which order the items will appear.**
- **Unchangeable**

```
thisset = {"apple", "banana", "cherry"}
print(thisset)
```

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## Python Dictionaries

- Dictionaries are used to store data values in key:value pairs.
- A dictionary is a collection which is ordered*, changeable and does not allow duplicates.
- As of Python version **3.7**, dictionaries are **ordered**. In Python **3.6** and earlier, dictionaries are **unordered**.
- Dictionaries are written with curly brackets, and have keys and values
- **Dictionaries are changeable, meaning that we can change, add or remove items after the dictionary has been created.**
- Dictionaries cannot have two items with the same key

```python
thisdict = {
  "brand": "Ford",
  "model": "Mustang",
  "year": 1964
}
print(thisdict["brand"])
```

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# End of the Day 6

Have you learned something?
See you all again on day 7

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