

Knowledge Organiser: Python 2 Fundamentals

Comparison operators

```
a > b
a >= b (greater than or equal to)
a < b
a <= b
a == b (equals)
a != b (not equals)
```

Dictionaries

We use dictionaries to store key/value pairs.

```
customer = {
    "name": "John Smith",
    "age": 30,
    "is_verified": True
}
```

Lists

```
numbers = [1, 2, 3, 4, 5]
numbers[0]           # returns the first item
numbers[1]           # returns the second item
numbers[-1]          # returns the first item from the end
numbers[-2]          # returns the second item from the end

numbers.append(6)     # adds 6 to the end
numbers.insert(0, 6)  # adds 6 at index position of 0
numbers.remove(6)     # removes 6
numbers.pop()         # removes the last item
numbers.clear()       # removes all the items
numbers.index(8)      # returns the index of first occurrence of 8
numbers.sort()        # sorts the list
numbers.reverse()     # reverses the list
numbers.copy()        # returns a copy of the list
```

Tuples

They are like read-only lists. We use them to store a list of items. But once we define a tuple, we cannot add or remove items or change the existing items.

```
coordinates = (1, 2, 3)
```

If Statements

```
if is_hot:
    print("hot day")
elif is_cold:
    print("cold day")
else:
    print("beautiful day")
```

Logical operators:

```
if has_high_income and has_good_credit:
    ...
if has_high_income or has_good_credit:
    ...
is_day = True
is_night = not is_day
```

