Comprehensions

Comprehensions | Purpose

What is a "list comprehension"?

Why would we want to use one?

List Comprehensions | a compact for loop

List comprehension implicitly appends items resulting from the "Expression"

Structure :[Expression *for* **Item** *in* **Iterable]**

For loop:

```
square =[]
for i in range (1,11):
    square.append(i**2)
print (square)
```

List comp:

```
[i**2 for i in range(1,11)]
```

Out:

```
[1,4,9,16,36,49,64,81,100]
```

List Comprehensions | loops with conditionals

Nested for loop: List comprehension is run on items also in the second iterable

Structure :[Expression *for* **Item** *in* **Iterable** *if* **Item** *in* **Iterable]**

Conditional: List comprehension produces tuples resulting from two loops

Structure :[(Expr1, Expr2) *for* **Item** *in* **Iter** *for* **Item** *in* **Iter]**

Dictionary comprehension: Curly {} braces and key value pairs define this one

Structure :{Item : Expression *for* **Item** *in* **Iterable}**

Comprehensions | Activity 3

What is JSON data?

Similar to a dictionary.