List Comprehensions

In [1]:
```
myList = [1,2,3,4,5]
[2*item for item in myList]
```

Out[1]:
```
[2, 4, 6, 8, 10]
```

List comprehensions with filters

In [3]:
```
myList = list(range(100))
filteredList = [item for item in myList if item % 10 == 0]
filteredList
```

Out[3]:
```
[0, 10, 20, 30, 40, 50, 60, 70, 80, 90]
```

In [5]:
```
filteredList = [item for item in myList if item % 10 < 3]
print(filteredList)
```

```
[0, 1, 2, 10, 11, 12, 20, 21, 22, 30, 31, 32, 40, 41, 42, 50, 51, 52, 60, 61,
62, 70, 71, 72, 80, 81, 82, 90, 91, 92]
```

List comprehensions with functions

In [6]:
```
myString = 'My name is Ryan Mitchell. I live in Boston'
myString.split('.')
```

Out[6]:
```
['My name is Ryan Mitchell', ' I live in Boston']
```

In [7]:
```
myString.split()
```

Out[7]:
```
['My', 'name', 'is', 'Ryan', 'Mitchell.', 'I', 'live', 'in', 'Boston']
```

In [8]:
```
def cleanWord(word):
    return word.replace('.', '').lower()

[cleanWord(word) for word in myString.split()]
```

Out[8]:
```
['my', 'name', 'is', 'ryan', 'mitchell', 'i', 'live', 'in', 'boston']
```

In [9]:
```
[cleanWord(word) for word in myString.split() if len(cleanWord(word)) < 3]
```

Out[9]:
```
['my', 'is', 'i', 'in']
```

Nested list comprehensions

In [10]:
```
[[cleanWord(word) for word in sentence.split()] for sentence in myString.split(
```

Out[10]:
```
[['my', 'name', 'is', 'ryan', 'mitchell'], ['i', 'live', 'in', 'boston']]
```

In [ ]:
```

```