

List Comprehensions are a unique way of quickly creating a list with Python

If you find yourself using a for loop along with `.append()` to create a list, List Comprehensions are a good alternative.

```
In [1]: mystring = 'hello'
```

```
In [2]: mylist = []  
  
for letter in mystring:  
    mylist.append(letter)
```

```
In [3]: mylist
```

```
Out[3]: ['h', 'e', 'l', 'l', 'o']
```

```
In [4]: mylist = [letter for letter in mystring]
```

```
In [5]: mylist
```

```
Out[5]: ['h', 'e', 'l', 'l', 'o']
```

Pictured above is essentially a flattened out for loop

```
In [6]: mylist = [x for x in 'word']
```

```
In [7]: mylist
```

```
Out[7]: ['w', 'o', 'r', 'd']
```

```
In [8]: mylist = [x for x in range(0,11)]
```

```
In [9]: mylist
```

```
Out[9]: [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
```

```
In [10]: mylist = [num for num in range(0,11)]
```

```
In [11]: mylist
```

```
Out[11]: [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
```

```
In [1]: mylist = [num**2 for num in range(0,11)]
```

```
In [2]: mylist
```

Out[2]: [0, 1, 4, 9, 16, 25, 36, 49, 64, 81, 100]

```
In [7]: mylist =[x for x in range(0,11) if x%2==0]
```

```
In [8]: mylist
```

Out[8]: [0, 2, 4, 6, 8, 10]

```
In [9]: mylist =[x**2 for x in range(0,11) if x%2==0]
```

```
In [ ]:
```

```
In [10]: mylist
```

Out[10]: [0, 4, 16, 36, 64, 100]

```
In [11]: celcius = [0,10,20,34.5]
         fahrenheit = [((9/5)*temp + 32) for temp in celcius]
```

```
In [12]: fahrenheit
```

Out[12]: [32.0, 50.0, 68.0, 94.1]

```
In [13]: fahrenheit = []
         for temp in celcius:
             fahrenheit.append(( (9/5)*temp + 32))
```

```
In [14]: fahrenheit
```

Out[14]: [32.0, 50.0, 68.0, 94.1]

```
In [ ]:
```