

# Finctions and generators

August 14, 2019

## 0.1 , print ,

```
[2]: for i in range(5):  
      print i,
```

0 1 2 3 4

## 0.2 range xrange (Python 2)

```
[4]: print type(range(5))  
      print type(xrange(5))
```

<type 'list'>  
<type 'xrange'>

## 0.3 xrange - ()

## 0.4 list comprehension

```
[5]: print [x**2 for x in range(1, 11)]
```

[1, 4, 9, 16, 25, 36, 49, 64, 81, 100]

```
[6]: print [x**2 for x in range(1, 11) if x % 2 == 0]
```

[4, 16, 36, 64, 100]

```
[8]: w = [x**2 for x in range(1, 11) if x % 2 == 0]  
      print(type(w))
```

<type 'list'>

## 0.5 , ?

```
[10]: w = (x**2 for x in range(1, 11) if x % 2 == 0)
      print type(w)
```

<type 'generator'>

```
[ ]:
```