



INTRO TO PYTHON FOR DATA SCIENCE

# Subsetting Lists



# Subsetting lists

```
In [1]: fam = ["liz", 1.73, "emma", 1.68, "mom", 1.71, "dad", 1.89]
```

```
In [2]: fam
```

```
Out[2]: ['liz', 1.73, 'emma', 1.68, 'mom', 1.71, 'dad', 1.89]
```

<b>index:</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
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**"zero-based indexing"**



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```
In [1]: fam = ["liz", 1.73, "emma", 1.68, "mom", 1.71, "dad", 1.89]
```

```
In [2]: fam
```

```
Out[2]: ['liz', 1.73, 'emma', 1.68, 'mom', 1.71, 'dad', 1.89]
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<b>index:</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
---------------	----------	----------	----------	----------	----------	----------	----------	----------

```
In [3]: fam[3]
```

```
Out[3]: 1.68
```



# Subsetting lists

```
In [1]: fam = ["liz", 1.73, "emma", 1.68, "mom", 1.71, "dad", 1.89]
```

```
In [2]: fam
```

```
Out[2]: ['liz', 1.73, 'emma', 1.68, 'mom', 1.71, 'dad', 1.89]
```

<b>index:</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
---------------	----------	----------	----------	----------	----------	----------	----------	----------

```
In [3]: fam[3]
```

```
Out[3]: 1.68
```

```
In [4]: fam[6]
```

```
Out[4]: 'dad'
```



# Subsetting lists

```
In [1]: fam = ["liz", 1.73, "emma", 1.68, "mom", 1.71, "dad", 1.89]
```

```
In [2]: fam
```

```
Out[2]: ['liz', 1.73, 'emma', 1.68, 'mom', 1.71, 'dad', 1.89]
```

<b>index:</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
	<b>-8</b>	<b>-7</b>	<b>-6</b>	<b>-5</b>	<b>-4</b>	<b>-3</b>	<b>-2</b>	<b>-1</b>

```
In [3]: fam[3]
```

```
Out[3]: 1.68
```

```
In [4]: fam[6]
```

```
Out[4]: 'dad'
```

```
In [5]: fam[-1]
```

```
Out[5]: 1.89
```



# Subsetting lists

```
In [1]: fam = ["liz", 1.73, "emma", 1.68, "mom", 1.71, "dad", 1.89]
```

```
In [2]: fam
```

```
Out[2]: ['liz', 1.73, 'emma', 1.68, 'mom', 1.71, 'dad', 1.89]
```

<b>index:</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
	<b>-8</b>	<b>-7</b>	<b>-6</b>	<b>-5</b>	<b>-4</b>	<b>-3</b>	<b>-2</b>	<b>-1</b>

```
In [3]: fam[3]
```

```
Out[3]: 1.68
```

```
In [4]: fam[6] ←
```

```
Out[4]: 'dad'
```

```
In [5]: fam[-1]
```

```
Out[5]: 1.89
```

```
In [6]: fam[-2] ←
```

```
Out[6]: 'dad'
```



# List slicing

```
In [7]: fam
Out[7]: ['liz', 1.73, 'emma', 1.68, 'mom', 1.71, 'dad', 1.89]
```

0      1      2      3      4      5      6      7

```
In [8]: fam[3:5]
Out[8]: [1.68, 'mom']
```

[ **start** : **end** ]

**inclusive**      **exclusive**



# List slicing

```
In [7]: fam
Out[7]: ['liz', 1.73, 'emma', 1.68, 'mom', 1.71, 'dad', 1.89]
         0      1      2      3      4      5      6      7

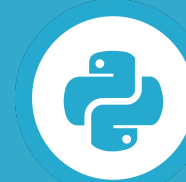
In [8]: fam[3:5]
Out[8]: [1.68, 'mom']

In [9]: fam[1:4]
Out[9]: [1.73, 'emma', 1.68]
```

[ **start** : **end** ]

**inclusive**      **exclusive**





# List slicing

```
In [7]: fam
```

```
Out[7]: ['liz', 1.73, 'emma', 1.68, 'mom', 1.71, 'dad', 1.89]
```

0	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

```
In [8]: fam[3:5]
```

```
Out[8]: [1.68, 'mom']
```

```
In [9]: fam[1:4]
```

```
Out[9]: [1.73, 'emma', 1.68]
```

```
In [10]: fam[:4]
```

```
Out[10]: ['liz', 1.73, 'emma', 1.68]
```



# List slicing

```
In [7]: fam
```

```
Out[7]: ['liz', 1.73, 'emma', 1.68, 'mom', 1.71, 'dad', 1.89]
```

0      1      2      3      4      5      6      7

```
In [8]: fam[3:5]
```

```
Out[8]: [1.68, 'mom']
```

```
In [9]: fam[1:4]
```

```
Out[9]: [1.73, 'emma', 1.68]
```

```
In [10]: fam[:4]
```

```
Out[10]: ['liz', 1.73, 'emma', 1.68]
```

```
In [11]: fam[5:]
```

```
Out[11]: [1.71, 'dad', 1.89]
```



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**Let's practice!**