

Python Basics Assignment 16

1. Create a list called `years_list`, starting with the year of your birth, and each year thereafter until the year of your fifth birthday. For example, if you were born in 1980, the list would be `years_list = [1980, 1981, 1982, 1983, 1984, 1985]`.

```
years_list = [ele for ele in range(1997,1997+6)]  
print(years_list)
```

```
[1997, 1998, 1999, 2000, 2001, 2002]
```

2. In which year in `years_list` was your third birthday? Remember, you were 0 years of age for your first year.

```
print(years_list[3])
```

```
2000
```

3. In the `years_list`, which year were you the oldest?

```
print(years_list[-1])
```

```
2002
```

4. Make a list called `things` with these three strings as elements: "mozzarella", "cinderella", "salmonella".

```
things = [ele+'ella' for ele in ['mozzar','cinder','salmon']]  
print(things)
```

```
['mozzarella', 'cinderella', 'salmonella']
```

5. Capitalize the element in `things` that refers to a person and then print the list. Did it change the element in the list?

```
for ele in range(len(things)):  
    if things[ele] == 'cinderella':  
        things[ele] = things[ele].capitalize()  
print(things)
```

```
['mozzarella', 'Cinderella', 'salmonella']
```

6. Make a surprise list with the elements "Groucho," "Chico," and "Harpo."

```
suprise_list = ['Groucho','Chico','Harpo']  
print(suprise_list)
```

```
['Groucho', 'Chico', 'Harpo']
```

7. Lowercase the last element of the surprise list, reverse it, and then capitalize it.

```
print(suprise_list[-1].lower()[::-1].capitalize())
```

```
Oprah
```

8. Make an English-to-French dictionary called *e2f* and print it. Here are your starter words: dog is chien, cat is chat, and walrus is morse.

```
e2f = {'dog':'chien','cat':'chat','walrus':'morse'}  
print(e2f)
```

```
{'dog': 'chien', 'cat': 'chat', 'walrus': 'morse'}
```

9. Write the French word for walrus in your three-word dictionary *e2f*.

```
print(e2f.get('walrus'))
```

```
morse
```

10. Make a French-to-English dictionary called *f2e* from *e2f*. Use the *items* method.

```
f2e = dict([ele[::-1] for ele in e2f.items()])  
print(f2e)
```

```
{'chien': 'dog', 'chat': 'cat', 'morse': 'walrus'}
```

11. Print the English version of the French word *chien* using *f2e*.

```
print(f2e.get('chien'))
```

```
dog
```

12. Make and print a set of English words from the keys in *e2f*.

```
print(list(e2f.keys()))
```

```
['dog', 'cat', 'walrus']
```

13. Make a multilevel dictionary called *life*. Use these strings for the topmost keys: 'animals', 'plants', and 'other'. Make the 'animals' key refer to another dictionary with the keys 'cats', 'octopi', and 'emus'. Make the 'cats' key refer to a list of strings with the values 'Henri', 'Grumpy', and 'Lucy'. Make all the other keys refer to empty dictionaries.

```
life = {  
    'animals':{  
        'cats':['Henri','Grumpy','Lucy'],  
        'octopi':{},  
        'emus':{}  
    },  
    'plants':{},  
    'other':{}  
}  
print(life)
```

```
{'animals': {'cats': ['Henri', 'Grumpy', 'Lucy'], 'octopi': {}, 'emus': {}}, 'plants': {}, 'other': {}}
```

14. Print the top-level keys of *life*.

```
print(list(life.keys()))
```

```
['animals', 'plants', 'other']
```

15. Print the keys for *life['animals']*.

```
print(list(life['animals'].keys()))
```

```
['cats', 'octopi', 'emus']
```

16. Print the values for life['animals']['cats']

```
print(life['animals']['cats'])
```

```
['Henri', 'Grumpy', 'Lucy']
```