

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]`.

```
In [1]: years_list = [year for year in range(1987,1993)]
years_list
```

```
Out[1]: [1987, 1988, 1989, 1990, 1991, 1992]
```

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

```
In [2]: years_list[3]
```

```
Out[2]: 1990
```

3. In the years list, which year were you the oldest?

```
In [3]: years_list[-1]
```

```
Out[3]: 1992
```

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

```
In [5]: lst1 = ["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?

```
In [6]: lst2 = [word.capitalize() if word == "cinderella" else word for word in lst1 ]
lst2
```

```
Out[6]: ['mozzarella', 'Cinderella', 'salmonella']
```

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

```
In [7]: surprise = ["Groucho", "Chico", "Harpo"]
```

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

```
In [8]: surprise[-1].lower()[::-1].capitalize()
```

```
Out[8]: '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.

```
In [9]: e2f = {'dog':'chien','cat':'chat','walrus':'morse'}
```

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

```
In [10]: e2f['walrus']
```

```
Out[10]: 'morse'
```

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

```
In [11]: f2e = {}
for keys, values in e2f.items():
    f2e[values] = keys

print(f2e)
```

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

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

```
In [12]: f2e['chien']
```

```
Out[12]: 'dog'
```

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

```
In [13]: print(e2f.keys())
```

```
dict_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.

```
In [14]: life = {'animals': {'cat': ['Henri', 'Grumpy', 'Lucy'], 'octopi': '', 'emus': ''},  
                'plants': '',  
                'other': '' }  
life
```

```
Out[14]: {'animals': {'cat': ['Henri', 'Grumpy', 'Lucy'], 'octopi': '', 'emus': ''},  
          'plants': '',  
          'other': ''}
```

14. Print the top-level keys of life.

```
In [15]: life.keys()
```

```
Out[15]: dict_keys(['animals', 'plants', 'other'])
```

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

```
In [16]: life['animals'].keys()
```

```
Out[16]: dict_keys(['cat', 'octopi', 'emus'])
```

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

```
In [17]: life['animals']['cat']
```

```
Out[17]: ['Henri', 'Grumpy', 'Lucy']
```

```
In [ ]:
```