ASSIGNMENT - 16 (PYTHON)

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].

```
# Define the year of birth
birth_year = 1995

# Create the list of years from birth year to fifth birthday
years_list = list(range(birth_year, birth_year + 5))

print(years_list)
```

Output will be: [1995, 1996, 1997, 1998, 1999]

This list includes the years from 1995 to 1999, which is the year of my fifth birthday.

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

```
# Birth year
birth_year = 1995

# Calculate the year of your third birthday
third_birthday_year = birth_year + 3

print("Year of your third birthday:", third_birthday_year)
```

Output will be: Year of your third birthday: 1998

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

```
# Define the list of years
years_list = [1995, 1996, 1997, 1998, 1999]

# Find the maximum year in the list
```

```
oldest_year = max(years_list)

print("Year you were the oldest:", oldest_year)
```

Output will be: Year you were the oldest: 1999

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

```
things = ["mozzarella", "cinderella", "salmonella"]

print(things)
```

This will create a list named **things** containing the strings "mozzarella", "cinderella", and "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?

```
# Create a list called things with the given strings as elements
things = ["mozzarella", "cinderella", "salmonella"]

# Capitalize the element that refers to a person
things[1] = things[1].capitalize()

# Print the modified list
print(things)
```

Output will be:
['mozzarella', 'Cinderella', 'salmonella']

Yes, the element "cinderella" has been capitalized to "Cinderella" in the printed list. However, the original list things remains unchanged.

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

```
# Create a surprise list with the given elements
```

```
surprise = ["Groucho", "Chico", "Harpo"]

print(surprise)
```

This will create a list named surprise containing the strings "Groucho", "Chico", and "Harpo".

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

To lowercase the last element of the surprise list, reverse it, and then capitalize it, you can follow these steps:

Lowercase the last element.
Reverse the string.
Capitalize the string.

Here's how we can do this:

```
# Lowercase the last element
last_element = surprise[-1].lower()

# Reverse the string
reversed_last_element = last_element[::-1]

# Capitalize the reversed string
capitalized_reversed_last_element = reversed_last_element.capitalize()

print(capitalized_reversed_last_element)
```

Output will be: ['Groucho', 'Chico', '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.

```
# Create the English-to-French dictionary
e2f = {
    "dog": "chien",
    "cat": "chat",
    "walrus": "morse"
}

# Print the dictionary
print(e2f)
```

Output will be: {'dog': 'chien', 'cat': 'chat', 'walrus': 'morse'}

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

```
# French word for "walrus" in the dictionary e2f
french_word_for_walrus = e2f["walrus"]

print(french_word_for_walrus)
```

Output will be: morse

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

```
# Create an empty French-to-English dictionary
f2e = {}

# Use the items method to iterate over key-value pairs in e2f and swap keys and values
for english, french in e2f.items():
    f2e[french] = english

print(f2e)
```

Output will be: {'chien': 'dog', 'chat': 'cat', 'morse': 'walrus'}

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

```
# English version of the French word "chien" using f2e dictionary
english_word_for_chien = f2e["chien"]

print(english_word_for_chien)
```

Output will be: dog

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

```
# Create a set of English words from the keys in e2f
english_words_set = set(e2f.keys())

# Print the set of English words
print(english_words_set)
```

Output will be: {'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.

```
# Create the multilevel dictionary life
life = {
    'animals': {
        'cats': ['Henri', 'Grumpy', 'Lucy'],
        'octopi': {},
        'emus': {}
    },
    'plants': {},
    'other': {}
```

```
}

# Print the multilevel dictionary
print(life)
```

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

14. Print the top-level keys of life.

```
# Print the top-level keys of the life dictionary
top_level_keys = life.keys()

print(top_level_keys)
```

Output will be:
['animals', 'plants', and 'other'.]

15. Print the keys for life[‘animals’].

```
# Print the keys for life['animals']
animals_keys = life['animals'].keys()

print(animals_keys)
```

Output will be:
['cats', 'octopi', 'emus']

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

```
# Print the values for life['animals']['cats']
cats_values = life['animals']['cats']

print(cats_values)
```

Output will be:
['Henri', 'Grumpy', 'Lucy']