Lab 2 Tasks

The code below creates two lists, one list with English words, and a corresponding list with French words.

In [ ]:
```
english = ["hello", "cat", "dog", "yes", "tomorrow", "yesterday",
           "difficult", "easy", "bad", "no", "tuesday", "january"]
```

In [ ]:
```
french = ["bonjour", "chat", "chien", "oui", "demain", "hier",
          "difficile", "facile", "mauvais", "non", "mardi", "janvier"]
```

Step 1: Confirm that both lists contain an equal number of values.

Using 'and' operator to check of both lists are true

1. Set up both lists
2. Check if both are even using modulo
3. Print result

In [16]:
```
english = ["hello", "cat", "dog", "yes", "tomorrow", "yesterday",
           "difficult", "easy", "bad", "no", "tuesday", "january"]

french = ["bonjour", "chat", "chien", "oui", "demain", "hier",
          "difficile", "facile", "mauvais", "non", "mardi", "janvier"]

if(len(english) % 2 == 0 and len(french) % 2 == 0):
    print("They are both even");
else:
    print("Lists are not both even");
```

```
They are both even
```

Step 2: Create a Python dictionary, which maps English words to French words, using the lists above.

In [35]:
```
english = ["hello", "cat", "dog", "yes", "tomorrow", "yesterday",
           "difficult", "easy", "bad", "no", "tuesday", "january"]

french = ["bonjour", "chat", "chien", "oui", "demain", "hier",
          "difficile", "facile", "mauvais", "non", "mardi", "janvier"]


#Creating the Dictionary
english_and_french = {};
#They are both same length so can run loop for length of either one
for counter in range(len(english)):
    english_and_french[english[counter]] = french[counter];
print(english_and_french)
```

```
{'hello': 'bonjour', 'cat': 'chat', 'dog': 'chien', 'yes': 'oui', 'tomorrow': 'demain', 'yesterday': 'hier', 'difficult': 'difficile', 'easy': 'facile', 'bad':
'mauvais', 'no': 'non', 'tuesday': 'mardi', 'january': 'janvier'}
```

Step 3: Remove all key-value pairs from the dictionary above, where the keys (i.e. the English words) contain less than 4 characters.

Filter items accessing key and then using that key to get the value in the Dictionary

Setting dictionary to hold new value of itself so two dictionaries to not exist

In [43]:
```
english_french = {k: v for k, v in english_and_french.items() if(len(v) > 4)}
print(english_french);
```

```
{'hello': 'bonjour', 'dog': 'chien', 'tomorrow': 'demain', 'difficult': 'difficile', 'easy': 'facile', 'bad': 'mauvais', 'tuesday': 'mardi', 'january': 'janvie
r'}
```

Step 4: Write a function *translate()* which accepts 3 parameters: a translation dictionary, a word to translate, and a default word. If the word is in the dictionary, the function should return the translated word. Otherwise, it should return the default word.

In [44]:
```
print(english_french);
```

```
{'hello': 'bonjour', 'dog': 'chien', 'tomorrow': 'demain', 'difficult': 'difficile', 'easy': 'facile', 'bad': 'mauvais', 'tuesday': 'mardi', 'january': 'janvie
r'}
```

Using english_french Dictionary from last question

In [59]:
```
def translate(dictionary, word_to_translate, default_word):
    if(word_to_translate in dictionary.keys()):
        print("Word found, translating...")
        print(dictionary[word_to_translate]);
        print("Completed");
        return dictionary[word_to_translate];
    else:
        print("Not found");
        return default_word;
#End of the function

response = translate(english_french, "dog", "Not in the dictionary");
print("Response is: ", response);
```

```
Word found, translating...
chien
Completed
Response is:  chien
```

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