

1. Create a function that takes three integer arguments (a, b, c) and returns the amount of integers which are of equal value.

Examples:

equal(3, 4, 3) → 2

equal(1, 1, 1) → 3

equal(3, 4, 1) → 0

Notes:

Your function must return 0, 2 or 3.

Ans:

```
In [40]: 1 def equal(a,b,c):
2         output = 0
3         if a == b == c:
4             output = 3
5         elif a == b or b == c or a == c:
6             output = 2
7         else:
8             output = 0
9         print(f'equal({a},{b},{c}) → {output}')
10 equal(3, 4, 3)
11 equal(1, 1, 1)
12 equal(3, 4, 1)

equal(3,4,3) → 2
equal(1,1,1) → 3
equal(3,4,1) → 0
```

2. Write a function that converts a dictionary into a list of keys-values tuples.

Examples:

```
dict_to_list({
    "D": 1,
    "B": 2,
    "C": 3
}) → [("B", 2), ("C", 3), ("D", 1)]
```

```
dict_to_list({
    "likes": 2,
    "dislikes": 3,
    "followers": 10
}) → [("dislikes", 3), ("followers", 10), ("likes", 2)]
```

Notes:

Return the elements in the list in alphabetical order.

Ans:

```
In [47]: 1 def dict_to_list(dict1):
2         list1 = list(dict1.items())
3         print(f'dict_to_list({dict1}) → [{sorted(list1)}]')
4 dict_to_list({"D": 1, "B": 2, "C": 3})
5 dict_to_list({"likes": 2, "dislikes": 3, "followers": 10})

dict_to_list({'D': 1, 'B': 2, 'C': 3}) → [(('B', 2), ('C', 3), ('D', 1))]
dict_to_list({'likes': 2, 'dislikes': 3, 'followers': 10}) → [(('dislikes', 3), ('followers', 10), ('likes', 2))]
```

3. Write a function that creates a dictionary with each (key, value) pair being the (lower case, upper case) versions of a letter, respectively.

Examples:

mapping(["p", "s"]) → { "p": "P", "s": "S" }

mapping(["a", "b", "c"]) → { "a": "A", "b": "B", "c": "C" }

mapping(["a", "v", "y", "z"]) → { "a": "A", "v": "V", "y": "Y", "z": "Z" }

Notes:

All of the letters in the input list will always be lowercase.

Ans:

```
In [59]: 1 def mapping(list1):
2         dict1 = {}
3         for i in list1:
4             dict1[i] = i.upper()
5         print(f'mapping({list1})→{dict1}')
6 mapping(["p", "s"])
7 mapping(["a", "b", "c"])
8 mapping(["a", "v", "y", "z"])

mapping(['p', 's'])→{'p': 'P', 's': 'S'}
mapping(['a', 'b', 'c'])→{'a': 'A', 'b': 'B', 'c': 'C'}
mapping(['a', 'v', 'y', 'z'])→{'a': 'A', 'v': 'V', 'y': 'Y', 'z': 'Z'}
```

4. Write a function, that replaces all vowels in a string with a specified vowel.

Examples:

vow_replace("apples and bananas", "u") → "upplus und bununus"

vow_replace("cheese casserole", "o") → "chooso cossorolo"

vow_replace("stuffed jalapeno poppers", "e") → "steffed jelepene peppers"

Notes:

All words will be lowercase. Y is not considered a vowel.

Ans:

```
In [60]: 1 def vow_replace(string,v):
2         vowels = ['a','e','i','o','u','A','E','I','O','U']
3         new = string
4         for i in string:
5             if i in vowels:
6                 new = new.replace(i,v)
7         print(f'vow_replace({string}, {v}) → {new}')
8 vow_replace("apples and bananas", "u")
9 vow_replace("cheese casserole", "o")
10 vow_replace("stuffed jalapeno poppers", "e")

vow_replace(apples and bananas, u) → upplus und bununus
vow_replace(cheese casserole, o) → chooso cossorolo
vow_replace(stuffed jalapeno poppers, e) → steffed jelepene peppers
```

5. Create a function that takes a string as input and capitalizes a letter if its ASCII code is even and returns its lower case version if its ASCII code is odd.

Examples:

ascii_capitalize("to be or not to be!") → "To Be oR NoT To Be!"

ascii_capitalize("THE LITTLE MERMAID") → "ThE LiTTLe meRmaiD"

ascii_capitalize("Oh what a beautiful morning.") → "oH wHaT a BeauTiFuL moRniNg."

Ans:

The screenshot shows a Jupyter Notebook running in a web browser. The browser's address bar shows the URL `localhost:8888/notebooks/Desktop/Untitled.ipynb`. The Jupyter interface includes a menu bar (File, Edit, View, Insert, Cell, Kernel, Widgets, Help), a toolbar with icons for file operations and execution, and a status bar at the bottom indicating the kernel is Python 3 (ipykernel).

The notebook contains two code cells. The first cell defines a function `vow_replace` and demonstrates its use with three strings. The second cell defines a function `ascii_capitalize` and demonstrates its use with three strings.

```
7 print(f'vow_replace({string}, {v}) → {new}')
8 vow_replace("apples and bananas", "u")
9 vow_replace("cheese casserole", "o")
10 vow_replace("stuffed jalapeno poppers", "e")

vow_replace(apples and bananas, u) → upplus und bununus
vow_replace(cheese casserole, o) → chooso cossorolo
vow_replace(stuffed jalapeno poppers, e) → steffed jelepene peppers

In [74]: 1 def ascii_capitalize(string):
2         new = ''
3         for i in string.lower():
4             if ord(i)%2 == 0:
5                 new += i.upper()
6             else:
7                 new += i
8         print(f'ascii_capitalize({string}) → {new}')
9         ascii_capitalize("to be or not to be!")
10        ascii_capitalize("THE LITTLE MERMAID")
11        ascii_capitalize("Oh what a beautiful morning.")

ascii_capitalize(to be or not to be!) → To Be oR NoT To Be!
ascii_capitalize(THE LITTLE MERMAID) → THE LiTTLe meRmaID
ascii_capitalize(Oh what a beautiful morning.) → oH wHaT a BeauTiFuL moRniNg.
```

The bottom of the image shows a Windows taskbar with various application icons, a search bar, and system information including the date (07-05-2022) and time (21:58).