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EXERCISE 1

(1) print("\ta\tb\tc") = a b c

print("\\\\") = \\

print(" ' ") = '

print("\"\"\"") = """

print("C:\nin\the downward spiral") = C:

in he downward spiral

(2) print("/ \\ // \\\\ /// \\\\\\") = / \ // \\ /// \\\

(3) print("This quote is from\n Irish poet Oscar Wilde:")

print("\"Music makes one feel so romantic\n- at least it always gets on one's nerves – \nwhich is the same thing nowadays.\"")

(4) print('A "quoted" String is\n \'much\' better if you learn\nthe rules of "escape sequences."

Also, "" represents an empty String. Don\'t forget: use \\" instead of " ! \'\' is not the same as "')

(5) 9 / 5 = 1.8

695 % 20 = 15

7 + 6 * 5 = 37

7 * 6 + 5 = 47

248 % 100 / 5 = 8

6 * 3 - 9 / 4 = 15.75

(5 - 7) * 4 = -8

6 + (18 % (17 - 12)) = 9

EXERCISE 3

(1) def find_max_value(lst):

    max_value = max(lst)

    return max_value

Example:

```
array1 = [2, 4, 7, 4, 23, 5, 1, 4, 8, 9]
max_value = find_max_value(array1)
print("Maximum value:", max_value)
```

(2) def calculate_average(lst):

    average = sum(lst) / len(lst)

    return average

Example:

```
list2 = [4, 7, 1, 5, 11, 53, 12, 46, 84, 23]
average_value = calculate_average(list2)
print("Average value:", average_value)
```

(3) def reverse_print(lst):

    reversed_list = list(reversed(lst))

    for num in reversed_list:

        print(num, end=" ")

Example:

```
list3 = [2, 6, 7, 45, 23, 53, 14, 45, 89, 5]
print("Reversed list:")
reverse_print(list3)
```

(4) def compare_lists(list1, list2):

```
    if len(list1) != len(list2):
        return False
    for i in range(len(list1)):
        if list1[i] >= list2[i]:
            return False
    return True
```

Example:

```
list4a = [1, 2, 3]
list4b = [4, 5, 6]
result = compare_lists(list4a, list4b)
print("Result:", result)
```

(5) def swap_elements(lst, index1, index2):

```
    lst[index1], lst[index2] = lst[index2], lst[index1]
```

Example:

```
list5 = [10, 20, 30, 40, 50]
index1, index2 = 1, 3
swap_elements(list5, index1, index2)
print("List after swapping elements at indexes", index1, "and", index2, ":", list5)
```

(6) def combine_lists(list1, list2):

```
    combined_list = list1 + list2
    return combined_list
```

Example:

```
list6a = [1, 2, 3]
list6b = [4, 5, 6]
result_list6 = combine_lists(list6a, list6b)
print("Combined list:", result_list6)
```

(7) def last_index_of_value(lst, value):

```
    try:
        last_index = len(lst) - lst[::-1].index(value) - 1
        return last_index
    except ValueError:
        return -1
```

Example:

```
list7 = [74, 85, 102, 99, 101, 85, 56]
value7 = 85
last_index7 = last_index_of_value(list7, value7)
print(f"Last index of {value7}:", last_index7)
```

(8) def calculate_range(lst):

```
    range_value = max(lst) - min(lst) + 1
    return range_value
```

Example:

```
list8 = [36, 12, 25, 19, 46, 31, 22]
range_value8 = calculate_range(list8)
print("Range of values:", range_value8)
```

(9) def count_elements_between(lst, min_value, max_value):

```
    count = sum(min_value <= x <= max_value for x in lst)
    return count
```

Example:

```
list9 = [14, 1, 22, 17, 36, 7, -43, 5]
min_value9, max_value9 = 4, 17
count9 = count_elements_between(list9, min_value9, max_value9)
print(f"Number of elements between {min_value9} and {max_value9}:", count9)
```

(10) def is_sorted(lst):
    return all(lst[i] <= lst[i + 1] for i in range(len(lst) - 1))

Example:

```
list10a = [16.1, 12.3, 22.2, 14.4]
list10b = [1.5, 4.3, 7.0, 19.5, 25.1, 46.2]
result10a = is_sorted(list10a)
result10b = is_sorted(list10b)
print("Is list10a sorted?", result10a)
print("Is list10b sorted?", result10b)
```