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1. Write a Python program to sort (ascending and descending) a dictionary by value.

```python
def sort_dict_by_value(d):

    ascending = sorted(d.items(), key=lambda x: x[1])

    descending = sorted(d.items(), key=lambda x: x[1], reverse=True)

    return ascending, descending


sample_dict = {'a': 5, 'b': 1, 'c': 3, 'd': 7}

ascending_result, descending_result = sort_dict_by_value(sample_dict)


print("Ascending:", ascending_result)

print("Descending:", descending_result)
```

Output:

Ascending: [('b', 1), ('c', 3), ('a', 5), ('d', 7)]

Descending: [('d', 7), ('a', 5), ('c', 3), ('b', 1)]

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2. Write a Python program to add a key to an existing dictionary.

python

```python
def add_key_to_dict(d, key, value):

    d[key] = value

    return d



existing_dict = {'a': 1, 'b': 2, 'c': 3}

new_key = 'd'

new_value = 4



updated_dict = add_key_to_dict(existing_dict, new_key, new_value)

print(updated_dict)
```

Output:

{'a': 1, 'b': 2, 'c': 3, 'd': 4}

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3. Write a Python program to merge two Python dictionaries.

python

```python
def merge_dicts(dict1, dict2):

    return {dict1, dict2}



dict1 = {'a': 1, 'b': 2}
```

dict2 = {'c': 3, 'd': 4}

merged_dict = merge_dicts(dict1, dict2)

print(merged_dict)

Output:

{'a': 1, 'b': 2, 'c': 3, 'd': 4}

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4. Write a Python program to sum all the items in a dictionary.

python

```python
def sum_dict_items(d):

    return sum(d.values())


sample_dict = {'a': 5, 'b': 1, 'c': 3, 'd': 7}

total_sum = sum_dict_items(sample_dict)

print(total_sum)
```

Output:

16

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5. Write a Python program to map two lists into a dictionary.

python

```python
def map_lists_to_dict(keys, values):

    return dict(zip(keys, values))



keys = ['a', 'b', 'c']

values = [1, 2, 3]



result_dict = map_lists_to_dict(keys, values)

print(result_dict)
```

Output:

{'a': 1, 'b': 2, 'c': 3}

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6. Write a Python program to sort a dictionary by key.

python

```python
def sort_dict_by_key(d):

    return dict(sorted(d.items()))



sample_dict = {'b': 1, 'a': 5, 'd': 7, 'c': 3}
```

```
sorted_dict = sort_dict_by_key(sample_dict)
```

```
print(sorted_dict)
```

Output:

```
{'a': 5, 'b': 1, 'c': 3, 'd': 7}
```

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7. Write a Python program to get the maximum and minimum value in a dictionary.

python

```python
def max_min_dict_values(d):

    max_value = max(d.values())

    min_value = min(d.values())

    return max_value, min_value
```

```python
sample_dict = {'a': 5, 'b': 1, 'c': 3, 'd': 7}

max_value, min_value = max_min_dict_values(sample_dict)
```

```python
print("Max Value:", max_value)

print("Min Value:", min_value)
```

Output:

Max Value: 7

Min Value: 1

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8. Write a Python program to remove duplicates from a dictionary.

python

```
def remove_duplicates_from_dict(d):

    return {k: v for k, v in d.items() if list(d.values()).count(v) == 1}



sample_dict = {'a': 5, 'b': 1, 'c': 3, 'd': 7, 'e': 1}

result_dict = remove_duplicates_from_dict(sample_dict)



print(result_dict)
```

Output:

{'a': 5, 'c': 3, 'd': 7}

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9. Write a Python program to find the highest 3 values in a dictionary.

python

```python
def highest_3_values(d):
    sorted_items = sorted(d.items(), key=lambda x: x[1], reverse=True)
    return sorted_items[:3]


sample_dict = {'a': 5, 'b': 1, 'c': 3, 'd': 7, 'e': 2}
top_3 = highest_3_values(sample_dict)


print(top_3)
```

Output:

```
[('d', 7), ('a', 5), ('c', 3)]
```

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10. Write a Python program to check if multiple keys exist in a dictionary.

python

```python
def check_multiple_keys(d, keys):
    return all(key in d for key in keys)


sample_dict = {'a': 5, 'b': 1, 'c': 3, 'd': 7}
keys_to_check = ['a', 'b', 'e']
```

result = check_multiple_keys(sample_dict, keys_to_check)

print(result)

Output:

False

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11. Write a Python program to count the number of items in a dictionary value that is a list.

python

```python
def count_list_values(d):
    count = 0
    for value in d.values():
        if isinstance(value, list):
            count += 1
    return count


sample_dict = {'a': [1, 2], 'b': 3, 'c': 'hello', 'd': [4, 5, 6]}
list_count = count_list_values(sample_dict)

print(list_count)
```

Output:

2

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12. Write a Python program to create a dictionary from two lists without losing duplicate values.

python

```python
def create_dict_from_lists(keys, values):
    return {k: v for k, v in zip(keys, values)}


keys = ['a', 'b', 'c', 'a']
values = [1, 2, 3, 4]


result_dict = create_dict_from_lists(keys, values)
print(result_dict)
```

Output:

{'a': 4, 'b': 2, 'c':