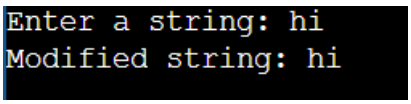
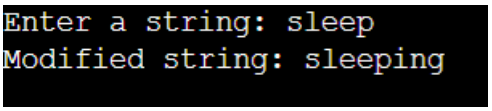
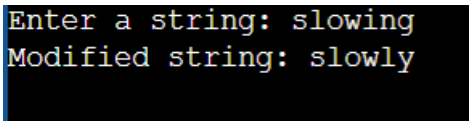
Assignment-2

1.
```
def modify_string(input_str):
    if len(input_str) < 3:
        return input_str
    elif input_str.endswith('ing'):
        return input_str[:-3] + 'ly'
    else:
        return input_str + 'ing'
input_string = input("Enter a string: ")
result = modify_string(input_string)
print("Modified string:", result)
```

Output-







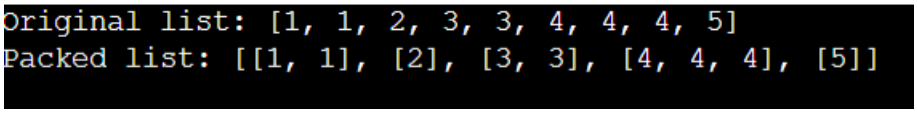
2.
```
def find_longest_word(words):
    if not words:
        return None, 0
    longest_word = max(words, key=len)
    length_of_longest_word = len(longest_word)
    return longest_word, length_of_longest_word
word_list = ["Harshitha", "Sripriya", "Anisha", "Siri"]
longest_word, length_of_longest_word = find_longest_word(word_list)
print("Longest word:", longest_word)
print("Length of the longest word:", length_of_longest_word)
```

Output-

```
Longest word: Harshitha
Length of the longest word: 9
```

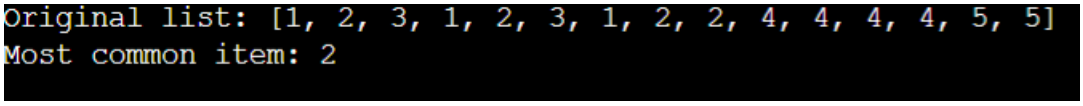
3.
```
def pack_duplicates(lst):
    packed_list = []
    current_group = []
    for element in lst:
        if not current_group or element == current_group[-1]:
            current_group.append(element)
        else:
            packed_list.append(current_group)
            current_group = [element]
    if current_group:
        packed_list.append(current_group)
    return packed_list
input_list = [1, 1, 2, 3, 3, 4, 4, 4, 5]
result = pack_duplicates(input_list)
print("Original list:", input_list)
print("Packed list:", result)
```

Output-



4.
```
from collections import Counter
def most_common_item(lst):
    if not lst:
        return None
    counts = Counter(lst)
    most_common = counts.most_common(1)[0][0]
    return most_common
input_list = [1, 2, 3, 1, 2, 3, 1, 2, 2, 4, 4, 4, 4, 5, 5]
result = most_common_item(input_list)
print("Original list:", input_list)
print("Most common item:", result)
```

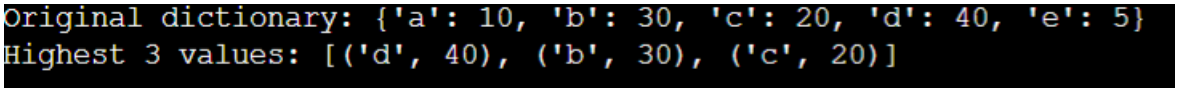
Output-



5.
```
def highest_values(dictionary):
    sorted_items = sorted(dictionary.items(), key=lambda x: x[1],
reverse=True)
    top_3_items = sorted_items[:3]

    return top_3_items
my_dict = {'a': 10, 'b': 30, 'c': 20, 'd': 40, 'e': 5}
result = highest_values(my_dict)
print("Original dictionary:", my_dict)
print("Highest 3 values:", result)
```

Output-



6. def top_three_items(shop_data):
    sorted_items = sorted(shop_data.items(), key=lambda x: x[1], reverse=True)
    top_3_items = sorted_items[:3]
    return top_3_items
shop_data = {'item1': 45.50, 'item2': 35, 'item3': 41.30, 'item4': 55, 'item5': 24}
result = top_three_items(shop_data)
print("Sample data:", shop_data)
print("Top three items:")
for item, price in result:
    print(f"{item} {price}")

Output-

```
Sample data: {'item1': 45.5, 'item2': 35, 'item3': 41.3, 'item4': 55, 'item5': 24}
Top three items:
item4 55
item1 45.5
item3 41.3
```