



Python Assignment 1

Question 1:

Write a Python program to get a list, sorted in increasing order by the last element in each tuple from a given list of non-empty tuples. Sample List : [(2, 5), (1, 2), (4, 4), (2, 3), (2, 1)]

```
In [1]: sample_list = [(2, 5), (1, 2), (4, 4), (2, 3), (2, 1)]
sorted_list = sorted(sample_list, key=lambda x: x[-1])
print("Sorted List:", sorted_list)
```

Sorted List: [(2, 1), (1, 2), (2, 3), (4, 4), (2, 5)]

Question 2:

Write a Python program to get a string from a given string where all occurrences of its first char have been changed to '\$', except the first char itself. Sample String : 'restart'

```
In [ ]: def replace_char(s):
    first_char = s[0]
    modified = first_char + s[1:].replace(first_char, '$')
    return modified

sample_str = "restart"
print("Original String:", sample_str)
print("Modified String:", replace_char(sample_str))
```

Question 3:

Write a Python program to find the first appearance of the substring 'not' and 'poor' from a given string, if 'bad' follows the 'poor', replace the whole 'not'...'poor' substring with 'good'. Return the resulting string.

Sample String : 'The lyrics is not that poor!'

```
In [2]: def not_poor_replace(s):
    not_index = s.find('not')
    poor_index = s.find('poor')
    if not_index != -1 and poor_index != -1 and poor_index > not_index:
        s = s[:not_index] + 'good' + s[poor_index + 4:]
    return s

sample_str = "The lyrics is not that poor!"
print("Original String:", sample_str)
print("Modified String:", not_poor_replace(sample_str))
```

```
Original String: The lyrics is not that poor!
Modified String: The lyrics is good!
```

Question 4:

Write a python program to sort a dictionary by value.

```
In [9]: my_dict = {'apple': 10, 'banana': 2, 'cherry': 7, 'date': 5}

sorted_dict = dict(sorted(my_dict.items(), key=lambda item: item[1]))

print("Dictionary sorted by value:")
print(sorted_dict)
```

```
Dictionary sorted by value:
{'banana': 2, 'date': 5, 'cherry': 7, 'apple': 10}
```

Question 5:

Write a python program to add key to a dictionary.

```
In [3]: my_dict = {"name": "Atul", "age": 23}
print("Original dictionary:", my_dict)
my_dict["city"] = "Dharamshala"
print("Dictionary after adding new key:", my_dict)
my_dict["country"] = "India"
my_dict.update({"pincode": 176217})
print("Final dictionary:", my_dict)
```

```
Original dictionary: {'name': 'Atul', 'age': 23}
Dictionary after adding new key: {'name': 'Atul', 'age': 23, 'city': 'Dharamshala'}
Final dictionary: {'name': 'Atul', 'age': 23, 'city': 'Dharamshala', 'country': 'India', 'pincode': 176217}
```