Basic Dictionary Operations

Create a Dictionary:

Create a dictionary with keys as numbers from 1 to 5 and values as their cubes.

```
dict1 = {1:1**3, 2:2**3, 3:3**3, 4:4**3, 5:5**3}
print(dict1)
```

```
{1: 1, 2: 8, 3: 27, 4: 64, 5: 125}
```

Access and Modify a Dictionary:

Given a dictionary student = {'name': 'John', 'age': 22, 'grade': 'A'}, do the following:

- **Access and print the student's name.**
- **Update the student's grade to 'A+'.**

```
student = {'name': 'John', 'age': 22, 'grade': 'A'}
print("Student's name:", student['name'])
student['grade'] = 'A+'
print("Updated grade of student is: ", student['grade'])
```

```
Student's name: John
Updated grade of student is:  A+

=== Code Execution Successful ===
```

Add and Remove Key-Value Pairs:

Create a dictionary inventory = {'apples': 10, 'bananas': 5}.
Add a new item oranges with a quantity of 7.
Remove the item bananas from the dictionary.

```
inventory = {'apples': 10, 'bananas': 5}
inventory['oranges'] = 7
print("Adding new element")
print(inventory)
inventory.pop('bananas')
print("Removing element")
print(inventory)
```

```
Adding new element
{'apples': 10, 'bananas': 5, 'oranges': 7}
Removing element
{'apples': 10, 'oranges': 7}

=== Code Execution Successful ===
```

Check for Key Presence:

Given a dictionary scores = {'Alice': 85, 'Bob': 90, 'Charlie': 88}, check if 'David' is a key in the dictionary.
Iterate Over a Dictionary:

```
scores = {'Alice': 85, 'Bob': 90, 'Charlie': 88}
if 'David' in scores:
    print("'David' is a key in the dictionary.")
else:
    print("'David' is not a key in the dictionary.")

#iteration of dictionary
for name, mark in scores.items():
    print(f"{name}: {mark}")
```

```
'David' is not a key in the dictionary.
Alice: 85
Bob: 90
Charlie: 88

=== Code Execution Successful ===
```

Write a program to iterate through a dictionary and print each key and its corresponding value.

```python
scores = {'Alice': 85, 'Bob': 90, 'Charlie': 88}
# Iterate
for key, value in scores.items():
    print(f"Key: {key}, Value: {value}")
```

```
Key: Alice, Value: 85
Key: Bob, Value: 90
Key: Charlie, Value: 88
```

Merge Two Dictionaries: Merge these two dictionaries:
dict1 = {'a': 1, 'b': 2}
dict2 = {'c': 3, 'd': 4}
Print the resulting dictionary.

```python
dict1 = {'a': 1, 'b': 2}
dict2 = {'c': 3, 'd': 4}
print("Merged dictionary:")
print(dict1 | dict2)
#method 2
print()
dict1.update(dict2)
print("Merged Dictionary:", dict1)
```

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

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

=== Code Execution Successful ===
```