**1. Write a program to add a key and value to a dictionary.**

**Sample Dictionary:** {0: 10, 1: 20}  
**Expected Result:** {0: 10, 1: 20, 2: 30}

d = {0: 10, 1: 20}

d[2] = 30

print("Updated Dictionary:", d)

**2. Write a program to concatenate the following dictionaries to create a new one.**

**Sample Dictionaries:**

dic1 = {1: 10, 2: 20}

dic2 = {3: 30, 4: 40}

dic3 = {5: 50, 6: 60}

**Expected Result:** {1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}

dic1 = {1: 10, 2: 20}

dic2 = {3: 30, 4: 40}

dic3 = {5: 50, 6: 60}

merged\_dict = {}

for d in (dic1, dic2, dic3):

merged\_dict.update(d)

print("Concatenated Dictionary:", merged\_dict)

**3. Write a program to check if a given key already exists in a dictionary.**

d = {1: 100, 2: 200, 3: 300}

key = int(input("Enter a key to check: "))

if key in d:

print("Key exists in the dictionary.")

else:

print("Key does not exist.")

**4. Write a program to iterate over a dictionary using for loop and print:**

* **Keys alone**
* **Values alone**
* **Both keys and values**

d = {1: "Apple", 2: "Banana", 3: "Cherry"}

print("Keys:")

for key in d:

print(key)

print("\nValues:")

for value in d.values():

print(value)

print("\nKey-Value Pairs:")

for key, value in d.items():

print(f"{key}: {value}")

**5. Write a program to prepare a dictionary where the keys are numbers between 1 and 15 (both included) and the values are squares of the keys.**

squares = {}

for i in range(1, 16):

squares[i] = i \*\* 2

print("Dictionary of squares:", squares)

**6. Write a program to sum all the values in a dictionary.**

d = {'a': 100, 'b': 200, 'c': 300}

total = sum(d.values())

print("Sum of all values:", total)