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#1. Write a program to create three dictionaries and
#concatenate them to create fourth dictionary.

# Create three dictionaries
dict1 = {'a': 1, 'b': 2}
dict2 = {'c': 3, 'd': 4}
dict3 = {'e': 5, 'f': 6}

# Concatenate dictionaries into a fourth one
dict4 = {}

# Add items from each dictionary to dict4
for d in (dict1, dict2, dict3):
    dict4.update(d)

# Print the final concatenated dictionary
print("Concatenated Dictionary:")
print(dict4)
```

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Concatenated Dictionary:
{'a': 1, 'b': 2, 'c': 3, 'd': 4, 'e': 5, 'f': 6}
```

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#2. Write a program to check whether a dictionary is empty or not.
# Example dictionary
my_dict = {}

# Check if the dictionary is empty
if not my_dict:
    print("The dictionary is empty.")
else:
    print("The dictionary is not empty.")
```

```
The dictionary is empty.
```

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#3. Create a dictionary with dept no, employee roll no. and salary.
#Find out department wise min and maximum of salary.
# List of employee records as dictionaries
employees = [
    {"dept_no": "HR", "roll_no": 101, "salary": 50000},
    {"dept_no": "IT", "roll_no": 102, "salary": 70000},
    {"dept_no": "HR", "roll_no": 103, "salary": 55000},
    {"dept_no": "IT", "roll_no": 104, "salary": 65000},
    {"dept_no": "Sales", "roll_no": 105, "salary": 60000},
    {"dept_no": "Sales", "roll_no": 106, "salary": 62000},
]

# Create a dictionary to group salaries by department
dept_salaries = {}

for emp in employees:
    dept = emp["dept_no"]
    salary = emp["salary"]
    if dept not in dept_salaries:
        dept_salaries[dept] = []
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    dept_salaries[dept].append(salary)

# Find min and max salary per department
print("Department-wise Min and Max Salaries:")
for dept, salaries in dept_salaries.items():
    print(f"{dept}: Min = {min(salaries)}, Max = {max(salaries)}")
```

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Department-wise Min and Max Salaries:
HR: Min = 50000, Max = 55000
IT: Min = 65000, Max = 70000
Sales: Min = 60000, Max = 62000
```

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#4. Write a program that reads a string from the keyboard and
#creates dictionary containing frequency of each character occurring in the string.

# Read input string
text = input("Enter a string: ")

# Create an empty dictionary for character frequencies
char_freq = {}

# Count frequency of each character
for char in text:
    if char in char_freq:
        char_freq[char] += 1
    else:
        char_freq[char] = 1

# Print the frequency dictionary
print("Character Frequencies:")
for char, freq in char_freq.items():
    print(f"'{char}': {freq}")
```

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Enter a string: celeste
Character Frequencies:
'c': 1
'e': 3
'l': 1
's': 1
't': 1
```

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#5. Create two dictionaries – one containing grocery items and their prices and another c
#By using the values from these two dictionaries compute the total bill.
# Dictionary of item prices
prices = {
    "rice": 50,
    "wheat": 40,
    "sugar": 35,
    "milk": 25,
    "eggs": 5
}

# Dictionary of item quantities purchased
quantities = {
    "rice": 2,     # 2 kg
    "wheat": 3,    # 3 kg
    "sugar": 1,    # 1 kg
    "milk": 4      # 4 litres
```

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    "milk": 4,      # 4 litres
    "eggs": 12      # 12 eggs
}

# Calculate total bill
total_bill = 0
print("Itemized Bill:")
for item in prices:
    if item in quantities:
        cost = prices[item] * quantities[item]
        total_bill += cost
        print(f"{item.capitalize()}: {quantities[item]} x {prices[item]} = {cost}")

print(f"\nTotal Bill: {total_bill}")
```

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Itemized Bill:
Rice: 2 x 50 = 100
Wheat: 3 x 40 = 120
Sugar: 1 x 35 = 35
Milk: 4 x 25 = 100
Eggs: 12 x 5 = 60

Total Bill: 415
```