Class Exercise:

Collections v2

You have been assigned a task to create a simple contact management system that can store and manipulate contact information. Each contact will have a name, phone number, and email address. To implement this, you will make use of the **UserDict, UserList**, and **UserString** classes in Python.

Your task is to create a class called **ContactManager** that will inherit from **UserDict, UserList**, and **UserString** to store and manage contacts.

The **ContactManager** class should have the following methods:

1. **add\_contact(name, phone\_number, email):** Adds a new contact to the contact manager. The method should create a dictionary with the contact information and add it to the data attribute inherited from **UserDict**.
2. **remove\_contact(name**): Removes a contact from the contact manager based on the name. The method should remove the contact from the data attribute inherited from **UserDict**.
3. **get\_contacts():** Returns a list of all contacts stored in the contact manager. The method should return the data attribute inherited from **UserDict**.
4. **get\_contact\_names()**: Returns a list of names of all contacts stored in the contact manager. The method should return the data attribute inherited from **UserDict**.
5. **get\_contact\_count():** Returns the number of contacts stored in the contact manager. The method should return the length of the data attribute inherited from **UserDict**.

from collections import UserDict, UserList, UserString

class ContactManager(UserDict, UserList, UserString):

    def add\_contact(self, name, phone\_number, email):

# Your code here

    def remove\_contact(self, name):

# Your code here

    def get\_contacts(self):

# Your code here

    def get\_contact\_names(self):

# Your code here

    def get\_contact\_count(self):

# Your code here

# Testing the ContactManager class

cm = ContactManager()

# Adding contacts

cm.add\_contact('John Doe', '123456789', 'john.doe@example.com')

cm.add\_contact('Jane Smith', '987654321', 'jane.smith@example.com')

cm.add\_contact('Alice Brown', '555555555', 'alice.brown@example.com')

# Getting contacts

# Your code here

# Removing a contact

cm.remove\_contact('John Doe')

# Getting updated contacts and contact count

# Your code here

Expected output:

{'name': 'John Doe', 'phone\_number': '123456789', 'email': 'john.doe@example.com'}

{'name': 'Jane Smith', 'phone\_number': '987654321', 'email': 'jane.smith@example.com'}

{'name': 'Alice Brown', 'phone\_number': '555555555', 'email': 'alice.brown@example.com'}

{'name': 'Jane Smith', 'phone\_number': '987654321', 'email': 'jane.smith@example.com'}

{'name': 'Alice Brown', 'phone\_number': '555555555', 'email': 'alice.brown@example.com'}

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