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while True:
    print("MAIN MENU\n1.List\n2.Tuple\n3.Set\n4.Dictionary\n5.Exit")
    menuch = int(input("Enter your choice:"))
    # list
    if menuch == 1:
        while True:
            print(
                "LIST OPERATIONS\n1.Defination\n2.Addition\n3.Deletion\n4.Previous Menu"
            )
            listch = int(input("Enter your choice:"))
            if listch == 1:
                print(
                    "List is a ordered collection of heterogeneous elements which are mutable."
                )
            # list addition
            elif listch == 2:
                lst = []
                n = int(input("Enter the total number of elements to create list:"))
                for i in range(0, n):
                    ele = input("Enter elements to create list:")
                    lst.append(ele)
                print("------------------------------")
                print(lst)
                print("------------------------------")
                while True:
                    print(
                        "1.To add single element.\n2.To add multiple elements.\n3.To add element at specific index position.\n4.Previous Menu"
                    )
                    addch = int(input("Enter your choice:"))
                    if addch == 1:
                        element = input("Enter element to add:")
                        lst.append(element)
                        print("------------------------------")
                        print(lst)
                        print("------------------------------")
                    elif addch == 2:
                        lst2 = []
                        elements = int(input("Enter number of elements to add:"))
                        for i in range(0, elements):
                            element = input("Enter Element to add:")
                            lst2.append(element)
                        lst.extend(lst2)
                        print("------------------------------")
                        print(lst)
                        print("------------------------------")
                    elif addch == 3:
                        pos = int(input("Enter the index position to add element:"))
                        val = input("Enter Element to add:")
                        lst.insert(pos, val)
                        print("------------------------------")
                        print(lst)
                        print("------------------------------")
                    elif addch == 4:
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                    break
                else:
                    print("Invalid Input")
        # list deletion
        elif listch == 3:
            lst = []
            n = int(input("Enter the total number of elements to create list:"))
            for i in range(0, n):
                ele = input("Enter list elements:")
                lst.append(ele)
            print("------------------------------")
            print(lst)
            print("------------------------------")
            while True:
                print(
                    "1.To delete last element.\n2.To delete element by index position.\n3.To delete element by value\n4.Previous Menu"
                )
                delch = int(input("Enter your choice:"))
                if delch == 1:
                    lst.pop()
                    print("------------------------------")
                    print(lst)
                    print("------------------------------")
                elif delch == 2:
                    pos = int(input("Enter index position to delete element:"))
                    lst.pop(pos)
                    print("------------------------------")
                    print(lst)
                    print("------------------------------")
                elif delch == 3:
                    element = input("Enter element to delete:")
                    lst.remove(element)
                    print("------------------------------")
                    print(lst)
                    print("------------------------------")
                elif delch == 4:
                    break
                else:
                    print("Invalid Input")
        elif listch == 4:
            break
        else:
            print("Invalid Input")
# tuple
elif menuch == 2:
    while True:
        print(
            "TUPLE OPERATIONS\n1.Defination.\n2.Addition.\n3.Deletion\n4.Previous Menu"
        )
        tplch = int(input("Enter your choice:"))
        if tplch == 1:
            print(
                "Tuple is a ordered collection of heterogeneous elements which are Immutable."
            )
        # tuple addition
        elif tplch == 2:
            tpl = ()
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            n = int(input("Enter the total number of elements to create tuple:"))
            lst = list(tpl)
            for i in range(0, n):
                ele = input("Enter elements to create tuple:")
                lst.append(ele)
            tpl = tuple(lst)
            print("------------------------------")
            print(tpl)
            print("------------------------------")
            while True:
                print(
                    "1.To add single element.\n2.To add multiple elements.\n3.To add element at specific index position.\n4.Previous Menu"
                )
                addch = int(input("Enter your choice:"))
                lst = list(tpl)
                if addch == 1:
                    element = input("Enter element to add:")
                    lst.append(element)
                    tpl = tuple(lst)
                    print("------------------------------")
                    print(tpl)
                    print("------------------------------")
                elif addch == 2:
                    lst2 = []
                    elements = int(input("Enter number of elements to add:"))
                    for i in range(0, elements):
                        element = input("Enter Element to add:")
                        lst2.append(element)
                    lst.extend(lst2)
                    tpl = tuple(lst)
                    print("------------------------------")
                    print(tpl)
                    print("------------------------------")
                elif addch == 3:
                    pos = int(input("Enter the index position to add element:"))
                    val = input("Enter Element to add:")
                    lst.insert(pos, val)
                    tpl = tuple(lst)
                    print("------------------------------")
                    print(tpl)
                    print("------------------------------")
                elif addch == 4:
                    break
                else:
                    print("Invalid Input")
        # tuple deletion
        elif tplch == 3:
            tpl = ()
            n = int(input("Enter the total number of elements to create tuple:"))
            lst = list(tpl)
            for i in range(0, n):
                ele = input("Enter elements to create tuple:")
                lst.append(ele)
            tpl = tuple(lst)
            print("------------------------------")
            print(tpl)
            print("------------------------------")
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            print(                                  )
            while True:
                print(
                    "1.To delete last element.\n2.To delete element by index position.\n3.To delete element by value\n4.Previous Menu"
                )
                delch = int(input("Enter your choice:"))
                lst = list(tpl)
                if delch == 1:
                    lst.pop()
                    tpl = tuple(lst)
                    print("------------------------------")
                    print(tpl)
                    print("------------------------------")
                elif delch == 2:
                    pos = int(input("Enter index position to delete element:"))
                    lst.pop(pos)
                    tpl = tuple(lst)
                    print("------------------------------")
                    print(tpl)
                    print("------------------------------")
                elif delch == 3:
                    element = input("Enter element to delete:")
                    lst.remove(element)
                    tpl = tuple(lst)
                    print("------------------------------")
                    print(tpl)
                    print("------------------------------")
                elif delch == 4:
                    break
                else:
                    print("Invalid Input")
        elif tplch == 4:
            break
        else:
            print("Invalid Input")
# set
elif menuch == 3:
    while True:
        print(
            "SET OPERATIONS\n1.Defination.\n2.Addition.\n3.Deletion\n4.Previous Menu"
        )
        setch = int(input("Enter your choice:"))
        if setch == 1:
            print(
                "Set is unordered collection of homogeneous elements which are mutable."
            )
        # set addition
        elif setch == 2:
            sett = set()
            n = int(input("Enter the total number of elements to create set:"))
            for i in range(0, n):
                ele = input("Enter elements to create set:")
                sett.add(ele)
            print("------------------------------")
            print(sett)
            print("------------------------------")
            while True:
```

```
                print(
                    "1.To add single element.\n2.To add multiple elements.\n3.Previous Menu"
                )
                addch = int(input("Enter your choice:"))
                if addch == 1:
                    element = input("Enter element to add:")
                    sett.add(element)
                    print("------------------------------")
                    print(sett)
                    print("------------------------------")
                elif addch == 2:
                    elements = int(input("Enter number of elements to add:"))
                    for i in range(0, elements):
                        element = input("Enter Element to add:")
                        sett.add(element)
                    print("------------------------------")
                    print(sett)
                    print("------------------------------")
                elif addch == 3:
                    break
                else:
                    print("Invalid Input")
        # set deletion
        elif setch == 3:
            sett = set()
            n = int(input("Enter the total number of elements to create set:"))
            for i in range(0, n):
                ele = input("Enter elements to create set:")
                sett.add(ele)
            print("------------------------------")
            print(sett)
            print("------------------------------")
            while True:
                print(
                    "1.To delete random element.\n2.To delete element by value.\n3.Previous Menu"
                )
                delch = int(input("Enter your choice:"))
                if delch == 1:
                    sett.pop()
                    print("------------------------------")
                    print(sett)
                    print("------------------------------")
                elif delch == 2:
                    element = input("Enter element to delete:")
                    sett.discard(element)
                    print("------------------------------")
                    print(sett)
                    print("------------------------------")
                elif delch == 3:
                    break
                else:
                    print("Invalid Input")
        elif setch == 4:
            break
        else:
            print("Invalid Input")
# dictionary
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    elif menuch == 4:
        while True:
            print(
                "SET OPERATIONS\n1.Defination.\n2.Addition.\n3.Update.\n4.Deletion.\n5.Previous Menu"
            )
            dictch = int(input("Enter your choice:"))
            if dictch == 1:
                print(
                    "Dictionary is unordered collection of heterogeneous elements which are mutable."
                )
            # dictionary addition
            elif dictch == 2:
                dict = {}
                n = int(
                    input(
                        "Enter the total number of key value pairs to create dictionary:"
                    )
                )
                for i in range(0, n):
                    key = input("Enter key to create dictionary:")
                    value = input("Enter value to create dictionary:")
                    dict[key] = value
                print("------------------------------")
                print(dict)
                print("------------------------------")
                elements = int(input("Enter number of key value pairs to add:"))
                for i in range(0, elements):
                    key = input("Enter key to add in dictionary:")
                    value = input("Enter value to add in dictionary:")
                    dict[key] = value
                print("------------------------------")
                print(dict)
                print("------------------------------")
            # dictionary update
            elif dictch == 3:
                dict = {}
                n = int(
                    input(
                        "Enter the total number of key value pairs to create dictionary:"
                    )
                )
                for i in range(0, n):
                    key = input("Enter key to create dictionary:")
                    value = input("Enter value to create dictionary:")
                    dict[key] = value
                print("------------------------------")
                print(dict)
                print("------------------------------")
                elements = int(input("Enter number of key value pairs to update:"))
                for i in range(0, elements):
                    key = input("Enter key to update in dictionary:")
                    value = input("Enter value to update in dictionary:")
                    dict[key] = value
                print("------------------------------")
                print(dict)
                print("------------------------------")
            # dictionary deletion
```

```
            elif dictch == 4:
                dict = {}
                n = int(
                    input(
                        "Enter the total number of key value pairs to create dictionary:"
                    )
                )
                for i in range(0, n):
                    key = input("Enter key to create dictionary:")
                    value = input("Enter value to create dictionary:")
                    dict[key] = value
                print("------------------------------")
                print(dict)
                print("------------------------------")
                elements = int(input("Enter number of key value pairs to delete:"))
                for i in range(0, elements):
                    key = input("Enter key to delete in dictionary:")
                    dict.pop(key)
                print("------------------------------")
                print(dict)
                print("------------------------------")
            elif dictch == 5:
                break
            else:
                print("Invalid Input")
    elif menuch == 5:
        break
    else:
        print("Invalid Input")
```

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MAIN MENU
1.List
2.Tuple
3.Set
4.Dictionary
5.Exit
Enter your choice:1
LIST OPERATIONS
1.Defination
2.Addition
3.Deletion
4.Previous Menu
Enter your choice:2
Enter the total number of elements to create list:3
Enter elements to create list:A
Enter elements to create list:B
Enter elements to create list:C
------------------------------
['A', 'B', 'C']
------------------------------
1.To add single element.
2.To add multiple elements.
3.To add element at specific index position.
4.Previous Menu
Enter your choice:
```