Assignment 2 Part 2

Name : PORIA MILAN SOVANLAL

Enrollment no. : 202202519010054

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# 1. Create a list of your five favorite fruits. And perfor
m following menu based operations :
    # 1. Add a new fruit to the list.
    # 2. Remove a fruit from the list.
    # 3. Print the first and last fruit in the list.
    # 4. Sort the list in alphabetical order.

fruits=['apple', 'kiwi', 'papaya', 'orange', 'greenapple']

# for i in range(1,6):
#     x = input(f"Enter fruit {i} : ")
#     fruits.append(x)
print(f"List of Fruits : {fruits}")

print("Menu: ")
print("1.Add a new fruit to the list.")
print("2.Remove a fruit from the list.")
print("3.Print the first and last fruit in the list.")
print("4. Sort the list in alphabetical order.")

choice = int(input("Enter choice : "))

if choice == 1:
    print("Add a new fruit : ")
    newFruit = input("Enter fruit name : ")
    fruits.append(newFruit)
    print(f"List of Fruits : {fruits}")
elif choice == 2:
    lastFruit = fruits.pop()
    print(f"List of Fruits : {fruits}")
```

```
    print(f"Removed the last item from list that was : {las
tFruit}")
elif choice == 3:
    firstFruit = fruits[0]
    lastFruit = fruits[len(fruits) - 1]
    print(f"List of Fruits : {fruits}")
    print(f"First fruit : {firstFruit}\nLast fruit : {lastF
ruit}")
elif choice == 4:
    fruits.sort()
    print("Sorted fruits in alphabetical order : ",fruits)
else:
    print("Invalid input select from 1 to 4 only!")
```

```
'''
    2. Create a list of numbers from 1 to 10.
        1. Print the first three numbers.
        2. Print the last three numbers.
        3. Print every other number in the list.
        4. Reverse the list.
'''

list = [1,2,3,4,5,6,7,8,9,10]

print("Menu")
print('''
        1. Print the first three numbers.
        2. Print the last three numbers.
        3. Print every other number in the list.
        4. Reverse the list.
''')

choice = int(input("Enter choice : "))

if choice == 1:
    print("First three number are : ",list[0:3])
elif choice == 2:
    list.reverse()
```

```
    print("Last three number are : ",list[0:3])
elif choice == 3:
    n = len(list)
    for i in range(0,n,2):
        print(list[i],end=" ")
elif choice == 4:
    list.reverse()
    print(list)
else:
    print("Invalid selection")
```

```
'''
    3. Create two lists: one of even numbers and one of odd
numbers.
        1. Print both the lists.
        2. Concatenate the two lists.
        3. Use the extend method to add the elements of the
second list to the first list.
        4. Sort the combined list
'''

list1 = [1,3,5,7,9]
list2 = [2,4,6,8,10]

print("List 1 : ",list1)
print("List 2 : ",list2)

concatedList = list1 + list2
print("Concated list : ",concatedList)

list1.extend(list2)
print("List1 : ",list1)

concatedList.sort()
print(concatedList)
```

```
'''
    4. Create a list of 25 numbers. Take input from user.
        1. Display the numbers greater than 10.
        2. Display the numbers that are even.
        3. Display the numbers that are odd.
        4. Display the numbers that are positive.
        5. Display the numbers that are negetive.
'''

list = [1,-2,3,4,5,6,-7,-8,-9,10,11,12,-13,14,15,16,-17,18,
-19,20,-21,22,23,24,-25]
n = len(list)

print("Menu : ")
print('''
    1. Display the numbers greater than 10.
    2. Display the numbers that are even.
    3. Display the numbers that are odd.
    4. Display the numbers that are positive.
    5. Display the numbers that are negetive.
''')

choice = int(input("Enter choice : "))


if choice == 1:

    for i in range(0,n):
        if list[i]>10:
            print(list[i],end=" ")
elif choice == 2:
    print("Even numbers : ")
    for i in range(0,n):
        if list[i] % 2 == 0:
            print(list[i])
elif choice == 3:
```

```
    print("Odd numbers : ")
    for i in range(0,n):
        if list[i] % 2 != 0:
            print(list[i])
elif choice == 4:
    print("Positive numbers : ")
    for i in range(0,n):
        if list[i]>0:
            print(list[i],end=" ")
elif choice == 5:
    print("Negative numbers : ")
    for i in range(0,n):
        if list[i]<0:
            print(list[i],end=" ")
else:
    print("Invalid choice !")
```

```
'''
    5. Create a list of 5 fruits. Perform following menu ba
sed operations.
        1. Take name of one fruit and index from user. Inse
rt new fruit and the given index.
        2. Take name of one fruit and index from user. Remo
ve new fruit and the given index.
        3. Remove last element from the list
'''

list = ['apple','banana','greenapple','papaya']

print("Menu : ")
print('''
    1. Take name of one fruit and index from user. Insert n
ew fruit and the given index.
    2. Take name of  fruit and index from user. Remove new
fruit .
    3. Remove last element from the list
```

```
''')

choice = int(input("Enter choice : "))

if choice == 1:
    i = int(input("Enter the index :"))
    value = input("Enter the fruit name  : ")
    list.insert(i,value)
    print("List : ",list)
elif choice == 2:
    value = input("Enter the fruit name to be removed")
    list.remove(value)
    print(list)
elif choice == 3:
    list.pop()
    print("List after removing the last element : ",list)
else:
    print("Invalid choice !!!")
```

```
'''
    6. Create a tuple with your five favorite fruits.
        1. Access and print the first and last items in the
tuple.
        2. Attempt to add a new food to the tuple and obser
ve what happens.
        3. Convert the tuple to a list, add a new fruit, an
d convert it back to a tuple.
'''



fruits = ('apple','banana','pineapple','orange','watermelo
n')
print(f"The tuple of fruits : {fruits}")

firstItem = fruits[0]
```

```
lastItem = fruits[4]

print(f"First fruit is : {firstItem}")
print(f"Last fruit  is  : {lastItem}")


# fruits[5] = "guava"
# The above line will give this error :
# TypeError: 'tuple' object does not support item assignmen
t

listOfFruits = list(fruits)
print(f"The list of fruits : {listOfFruits}")
listOfFruits.append('kiwi')
print(f"Added new fruit : {listOfFruits}")


# convert the listOfFruits back to a tuple
tupleOfFruits = tuple(listOfFruits)
print(f'The tuple of fruits : {tupleOfFruits}')
```

```
'''
7. Create a tuple with 10 elements. Write a menu based prog
ram to perform following

operations:
1. Find sum of all elements of tuple.
2. find average of all elements of tuple.
3. Sort the tuple
4. find biggest element of the tuple
5. find smallest element of the tuple
'''
```

```
tuple = (1,2,3,4,5,10,9,8,7,6)

print("Menu : ")
print('''
    1. Find sum of all elements of tuple.
    2. find average of all elements of tuple.
    3. Sort the tuple
    4. find biggest element of the tuple
    5. find smallest element of the tuple
''')

ch = int(input("Enter choie : "))
if ch == 1:
    sumOfTuple = sum(tuple)
    print("The sum of tuple is : ",sumOfTuple)
elif ch == 2:
    sumOfTuple = sum(tuple)
    avgOfTuple = sumOfTuple/len(tuple)
    print("The average of tuple is : ",avgOfTuple)
elif ch == 3:
    sortedTuple = sorted(tuple)
    print("Sorted tuple : ",sortedTuple)
elif ch == 4:
    maxElement = max(tuple)
    print(maxElement)
elif ch == 5:
    minElement = min(tuple)
    print(minElement)
else:
    print("Invalid !!")
```

```
#  8. Create two tuples. Concatenate them in new tuple and
display the same.
t1 = (1,2,3,4,5)
```

```
t2 = (6,7,8,9,10)

concated_tuple = t1 + t2
print(concated_tuple)
```

```
'''
    9. Create a tuple of list of 10 citites. Ask user to en
ter a city name and check if that city exists in the tuple
or not. Also display how many times that city is there in t
uple
'''


cities = ("Bangalore,Dubai,Ahmedabad,Mumbai,Kolkata,Surat,J
amanagar,Dubai,Delhi,Kashmir")

print(cities)

cityname = input("Enter city name : ")
if cityname in cities:
    countOfCity = cities.count(cityname)
    print(f"{cityname} is present {countOfCity} times in ci
ties tuple")
else:
    print("city not present!")
```

```
'''
    10. Create a tuple of 10 integers. Take startindex and
endindex from user. Display tuple
    elements between those indexes only
'''

tuple = (1,2,3,4,5,6,7,8,9,10)
```

```
startIndex = int(input("Enter start index : "))
endIndex = int(input("Enter end index : "))

print(tuple[startIndex:endIndex])
```

```
# 11. Create a dictionary that stores list of courses and n
o of students enroled as key and values
# respectively. Take name of course from user and display n
o of students enroled in that
# course.


data = {
    "IMCA":180,
    "BCA":200,
    "BCA Hons":150
}

key = input("Enter the course name : ")

print(f"Number of students in {key} : {data[key]}")
```

```
'''
12. Create a dictionary that stores list of courses and no
of students enroled as key and values respectively and perf
orm following menu based tasks:
1. display only keys
2. display only values
3. display both keys and values
'''



data = {
    "IMCA":180,
```

```
    "BCA":200,
    "BCA Hons":150
}

print("Menu : ")
print('''
    1. display only keys
    2. display only values
    3. display both keys and values
''')

ch = int(input("Enter choice : "))

if ch==1:
    print("keys : ")
    for  i in data:
        print(i)
elif ch==2:
    print("values")
    for i in data:
        print(data[i])
elif ch==3:
    print("Keys and values :")
    for key,value in data.items():
        print(f"{key} : {value}")
else:
    print("Invalid!!")
```