Practical6

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Online Shopping Cart: Imagine you're developing an online shopping platform. Create a Python program that simulates a user's shopping cart. • Allow the user to add product names and prices to their cart. • Display the current items in the cart. • Allow the user to remove items from the cart. • Calculate the total price and display the total number of items in the cart.

[6]:
```
items = []
price = []
shoppingCart = {}

while True:
    print("Enter 0 to exit")
    print("Enter 1 to add item to cart")
    print("Enter 2 to remove item from cart")
    print("Enter 3 to print cart")
    print("Enter 4 to print total price\n")
    count = len(items)
    choice = int(input("Enter your choice: "))

    if (choice == 1):
        while True:
            product = input("Enter product name ('0' to finish): ")
            if (product != "0"):
                rate = int(input("Enter product rate: "))
                items.append(product)
                price.append(rate)
            else:
                break
            for i in range(len(items)):
                shoppingCart[items[i]] = price[i]
        print("Items added successfully\n")

    elif (choice == 2):
        if(count == 0):
            print("Cart is empty")
        else:
            rem = int(input("Enter item index to remove:"))
            del items[rem]
            del price[rem]
```

```
            shoppingCart = {}
            for i in range(len(items)):
                    shoppingCart[items[i]] = price[i]
            for key, value in shoppingCart.items():
                print(key, ": " , value)
            count = len(items)
            print(f"Total number of items in cart is {count}")

    elif(choice == 3):
        if not shoppingCart:
            print("Cart is empty\n")
        else:
            for key, value in shoppingCart.items():
                print(key, ": " , value)
            count = len(items)
            print(f"Total number of items in cart is {count}")
    elif(choice == 4):
        total = sum(price)
        print("Total price of cart is: ", total)
        print("Total items in cart is: ", count)
    elif(choice == 0):
        break
    else:
        print("Enter valid choice!\n")
```

```
Enter 0 to exit
Enter 1 to add item to cart
Enter 2 to remove item from cart
Enter 3 to print cart
Enter 4 to print total price


Enter your choice:  1
Enter product name ('0' to finish):  Kitkat
Enter product rate:  20
Enter product name ('0' to finish):  Perk
Enter product rate:  5
Enter product name ('0' to finish):  Mad Angle
Enter product rate:  25
Enter product name ('0' to finish):  0

Items added successfully

Enter 0 to exit
Enter 1 to add item to cart
Enter 2 to remove item from cart
Enter 3 to print cart
Enter 4 to print total price
```

```
Enter your choice:  3

Kitkat :  20
Perk :  5
Mad Angle :  25
Total number of items in cart is 3
Enter 0 to exit
Enter 1 to add item to cart
Enter 2 to remove item from cart
Enter 3 to print cart
Enter 4 to print total price


Enter your choice:  4

Total price of cart is:  50
Total items in cart is:  3
Enter 0 to exit
Enter 1 to add item to cart
Enter 2 to remove item from cart
Enter 3 to print cart
Enter 4 to print total price


Enter your choice:  2
Enter item index to remove: 2

Kitkat :  20
Perk :  5
Total number of items in cart is 2
Enter 0 to exit
Enter 1 to add item to cart
Enter 2 to remove item from cart
Enter 3 to print cart
Enter 4 to print total price


Enter your choice:  0
```

Student Grade Analyzer: As a teacher, you have a list of student names and scores (out of 100) for a test. • Write a Python program that calculates the average score and identifies students who scored above the average.

[4]:
```
students = {"A": 97, "B": 65,"C": 80,"D": 57,"E": 90,"F": 95,"G": 79,"H":␣
 ↪83,"I": 60}
totalScors = 0
averageScore = 0
count = 0
totalScore = 0
scoreMoreThanAvg = {}
for value in students.values():
```

```
    totalScore += value
    count +=1

averageScore = totalScore/count

print("Average Score is:", averageScore)
for key, value in students.items():
    if(value > averageScore ):
        scoreMoreThanAvg[key] = value

print("Score greater than average are: ")
for key, value in scoreMoreThanAvg.items():
    print(f"{key} : {value}")
```

```
Average Score is: 78.44444444444444
Score greater than average are:
A : 97
C : 80
E : 90
F : 95
G : 79
H : 83
```

Temperature Converter: You're building a weather app. Create a Python program that converts temperatures between Celsius and Fahrenheit. • Prompt the user to enter a temperature value and a unit (C or F). • Calculate and display the converted temperature. • Example: If the user enters 32 C, the program should output 89.6 F.

[3]:
```
def celsiusToFahrenhiet(temp):
    fahrenheit = (temp * 9/5) + 32
    print(f"Temperature in Fahrenheit is: {fahrenheit}\n")
def fahrenhietToCelsius(temp):
    celsius = (temp - 32) * 5/9
    print(f"Temperature in Celsius is: {celsius}\n")

temprature = input("Enter temprature (with unit C or F):")
temprature = temprature.replace(" ", "")
unit = temprature[-1].upper()
temprature = int(temprature[:-1])
if unit == "C":
    celsiusToFahrenhiet(temprature)
elif unit == "F":
    fahrenhietToCelsius(temprature)
else:
    print("Invalid Unit")
```

```
Enter temprature (with unit C or F): 32 C

Temperature in Fahrenheit is: 89.6
```

Vowel Counter: You're developing a text analysis tool. Write a Python program that reads a sentence from the user. • Count the number of vowels (a, e, i, o, u) in the sentence. • Display the total count of each vowel.

[2]:
```
sentence = input("Enter sentence: ")
sentence = sentence.lower()
vowel = {"a": 0, "e": 0, "i": 0, "o": 0, "u": 0,}
countA = countE = countI = countO = countU = 0
for i in range(len(sentence)):
    if sentence[i] == "a":
        countA += 1
    elif sentence[i] == "e":
        countE += 1
    elif sentence[i] == "i":
        countI += 1
    elif sentence[i] == "o":
        countO += 1
    elif sentence[i] == "u":
        countU += 1
    else:
        continue
vowel["a"] = countA
vowel["e"] = countE
vowel["i"] = countI
vowel["o"] = countO
vowel["u"] = countU
for key, value in vowel.items():
    print(f"{key} : {value}")
```

```
Enter sentence:  Vowel Counter:  You're developing a text analysis tool. Write a
Python program that reads a sentence from the user.

a : 8
e : 13
i : 3
o : 9
u : 3
```

Bookstore Inventory: As a bookstore manager, you create a list of book titles and their corresponding quantities in stock. • Write a Python program that asks if the user is a manager or a normal user. • Then allow the manager to create and update the list of books. • Allow other users to search for a book title and check its availability. • Prompt the user to enter a book title. • If the book is in stock, display the quantity available; otherwise, show an appropriate message.

[1]:
```
inventory = {}
while True:
```

```
    role = input("Enter 0 to Exit\nEnter 1 for Manager\nEnter 2 for normal␣
↪user\n")
    if role == '0':
        break
    if role == '1':
        while True:
            print("1. Add a new book")
            print("2. Update book quantity")
            print("3. View inventory")
            print("4. Exit")
            choice = input("Enter your choice: ")
            if choice == '1':
                title = input("Enter book title: ")
                quantity = int(input("Enter quantity: "))
                inventory[title] = quantity
                print(f"Book '{title}' added with quantity {quantity}.")
            elif choice == '2':
                title = input("Enter book title to update: ")
                if title in inventory:
                    quantity = int(input("Enter new quantity: "))
                    inventory[title] = quantity
                    print(f"Book '{title}' updated with quantity {quantity}.")
                else:
                    print("Book not found")
            elif choice == '3':
                print("\nCurrent Inventory:")
                for key, value in inventory.items():
                    print(f"{key}: {value}")
            elif choice == '4':
                print("Exited")
                break
            else:
                print("Invalid choice.")
    elif role == '2':
        title = input("Enter the book title you are looking for: ")
        if title in inventory:
            print(f"The book '{title}' is available with quantity:␣
↪{inventory[title]}")
        else:
            print(f"The book '{title}' is not available in stock.")
    else:
        print("Invalid role.")
```

```
Enter 0 to Exit
Enter 1 for Manager
Enter 2 for normal user
 1
```

```
1. Add a new book
2. Update book quantity
3. View inventory
4. Exit

Enter your choice:  1
Enter book title:  RD Sharma
Enter quantity:  2

Book 'RD Sharma' added with quantity 2.
1. Add a new book
2. Update book quantity
3. View inventory
4. Exit

Enter your choice:  1
Enter book title:  Python
Enter quantity:  5

Book 'Python' added with quantity 5.
1. Add a new book
2. Update book quantity
3. View inventory
4. Exit

Enter your choice:  3


Current Inventory:
RD Sharma: 2
Python: 5
1. Add a new book
2. Update book quantity
3. View inventory
4. Exit

Enter your choice:  2
Enter book title to update:  Python
Enter new quantity:  9

Book 'Python' updated with quantity 9.
1. Add a new book
2. Update book quantity
3. View inventory
4. Exit

Enter your choice:  3


Current Inventory:
RD Sharma: 2
Python: 9
1. Add a new book
```

```
2. Update book quantity
3. View inventory
4. Exit

Enter your choice:  4

Exited

Enter 0 to Exit
Enter 1 for Manager
Enter 2 for normal user
 2
Enter the book title you are looking for:  Python

The book 'Python' is available with quantity: 9

Enter 0 to Exit
Enter 1 for Manager
Enter 2 for normal user
 0
```

[ ]: