Class Exercise:

Set v2

Exercise Description:

You are a manager at a grocery store and you need to keep track of the inventory of various products. Your task is to create a program that allows you to perform set operations and methods on the inventory. The program should have the following functionalities:

1. Add a product to the inventory.
2. Remove a product from the inventory.
3. Check if a product is available in the inventory.
4. Update the quantity of a product in the inventory.
5. Display the list of products that are out of stock.
6. Calculate the total value of the inventory.

To accomplish this, you need to create a menu-driven program that provides options to perform these operations. The program should continue executing until the user chooses to exit.

def add\_product(inventory, product, quantity):

# Your code here

def remove\_product(inventory, product):

# Your code here

def check\_product\_availability(inventory, product):

# Your code here

def update\_product\_quantity(inventory, product, quantity):

# Your code here

def display\_out\_of\_stock\_products(inventory):

# Your code here

def calculate\_inventory\_value(inventory, prices):

# Your code here

def main():

    inventory = {}

    prices = {

        "Apple": 0.5,

        "Banana": 0.3,

        "Orange": 0.4,

        "Mango": 1.0,

        "Strawberry": 0.2

    }

# Your code here

if \_\_name\_\_ == "\_\_main\_\_":

    main()

Menu:

1. Add song

2. Remove song

3. Check if song exists

4. Exit

Enter your choice: 1

Enter the name of the song to add: Shape of You

'Shape of You' has been added to the playlist.

Menu:

1. Add song

2. Remove song

3. Check if song exists

4. Exit

Enter your choice: 1

Enter the name of the song to add: Despacito

'Despacito' has been added to the playlist.

Menu:

1. Add song

2. Remove song

3. Check if song exists

4. Exit

Enter your choice: 2

Enter the name of the song to remove: Shape of You

'Shape of You' has been removed from the playlist.

Menu:

1. Add song

2. Remove song

3. Check if song exists

4. Exit

Enter your choice: 3

Enter the name of the song to check: Shape of You

'Shape of You' is not in the playlist.

Menu:

1. Add song

2. Remove song

3. Check if song exists

4. Exit

Enter your choice: 4

Exiting the program. Thank you!