CUETO, ALEXA JOYCE G.

TW23

ACTIVITY 6: OOP AND EXCEPTION (Screenshots and Source Code)

Screenshots of results:

```
_CUETO> & "C:/Users/Alexa Cueto/AppData/Local/Programs/Python/Python313/python.exe"

    --Item Management Application for Marketplace Items--

    --Menu--
    1. Add Item
    2. Show All Items
    3. Update Item
    4. Delete Item
    5. Exit
    Enter your choice: 1

    Enter ITEM ID (5 DIGITS): 12345
    Enter Item Name: Egg
    Enter Item Description: This is manufactured by Shelby's Farms.
    Enter Item Price: PHP 80.00
    Item  12345  added successfully.

    --Item Management Application for Marketplace Items--

    --Menu--
    1. Add Item
    2. Show All Items
    3. Update Item
    4. Delete Item
    5. Exit
    Enter your choice: 1

    Enter ITEM ID (5 DIGITS): 12346
    Enter Item Name: Butter
    Enter Item Description: This is manufactured by Kenzo's Farms.
    Enter Item Price: PHP 63.00
    Item  12346  added successfully.
```

```
    --Item Management Application for Marketplace Items--

    --Menu--
    1. Add Item
    2. Show All Items
    3. Update Item
    4. Delete Item
    5. Exit
    Enter your choice: 1

    Enter ITEM ID (5 DIGITS): 123456
    Item ID must be 5 digits.

    --Item Management Application for Marketplace Items--

    --Menu--
    1. Add Item
    2. Show All Items
    3. Update Item
    4. Delete Item
    5. Exit
    Enter your choice: 2

    --Items--

    Item ID: 12345
    Item Name: Egg
    Item Description: This is manufactured by Shelby's Farms.
    Item Price: 80.0

    Item ID: 12346
    Item Name: Butter
    Item Description: This is manufactured by Kenzo's Farms.
    Item Price: 63.0
```

```
--Item Management Application for Marketplace Items--

--Menu--
1. Add Item
2. Show All Items
3. Update Item
4. Delete Item
5. Exit
Enter your choice: 3

--Items--

Item ID: 12345
Item Name: Egg
Item Description: This is manufactured by Shelby's Farms.
Item Price: 80.0

Item ID: 12346
Item Name: Butter
Item Description: This is manufactured by Kenzo's Farms.
Item Price: 63.0

Enter Item ID to update (5 DIGITS): 12346
Enter new name [Leave blank to retain current value]:
Enter new description [Leave blank to retain current value]:
Enter new price [Leave blank to retain current value]: PHP 70.00
Item  12346  updated successfully.
```

```
--Item Management Application for Marketplace Items--

--Menu--
1. Add Item
2. Show All Items
3. Update Item
4. Delete Item
5. Exit
Enter your choice: 2

--Items--

Item ID: 12345
Item Name: Egg
Item Description: This is manufactured by Shelby's Farms.
Item Price: 80.0

Item ID: 12346
Item Name: Butter
Item Description: This is manufactured by Kenzo's Farms.
Item Price: 70.0
```

```
 --Item Management Application for Marketplace Items--

 --Menu--
1. Add Item
2. Show All Items
3. Update Item
4. Delete Item
5. Exit
Enter your choice: 3

 --Items--

 Item ID: 12345
 Item Name: Egg
 Item Description: This is manufactured by Shelby's Farms.
 Item Price: 80.0

 Item ID: 12346
 Item Name: Butter
 Item Description: This is manufactured by Kenzo's Farms.
 Item Price: 70.0

 Enter Item ID to update (5 DIGITS): 12567
 Item ID does not exist.
```

```
 --Item Management Application for Marketplace Items--

 --Menu--
1. Add Item
2. Show All Items
3. Update Item
4. Delete Item
5. Exit
Enter your choice: 4

 --Items--

 Item ID: 12345
 Item Name: Egg
 Item Description: This is manufactured by Shelby's Farms.
 Item Price: 80.0

 Item ID: 12346
 Item Name: Butter
 Item Description: This is manufactured by Kenzo's Farms.
 Item Price: 70.0

 Enter Item ID to delete (5 DIGITS): 12345
 Item  12345  deleted successfully.
```

```
--Item Management Application for Marketplace Items--

--Menu--
1. Add Item
2. Show All Items
3. Update Item
4. Delete Item
5. Exit
Enter your choice: 2

--Items--

Item ID: 12346
Item Name: Butter
Item Description: This is manufactured by Kenzo's Farms.
Item Price: 70.0

--Item Management Application for Marketplace Items--

--Menu--
1. Add Item
2. Show All Items
3. Update Item
4. Delete Item
5. Exit
Enter your choice: 4

--Items--

Item ID: 12346
Item Name: Butter
Item Description: This is manufactured by Kenzo's Farms.
Item Price: 70.0

Enter Item ID to delete (5 DIGITS): 12367
Item ID does not exist.
```

```
--Item Management Application for Marketplace Items--

--Menu--
1. Add Item
2. Show All Items
3. Update Item
4. Delete Item
5. Exit
Enter your choice: 4

--Items--

Item ID: 12346
Item Name: Butter
Item Description: This is manufactured by Kenzo's Farms.
Item Price: 70.0

Enter Item ID to delete (5 DIGITS): 12346
Item  12346  deleted successfully.

--Item Management Application for Marketplace Items--

--Menu--
1. Add Item
2. Show All Items
3. Update Item
4. Delete Item
5. Exit
Enter your choice: 2
No items to show.

--Item Management Application for Marketplace Items--

--Menu--
1. Add Item
2. Show All Items
3. Update Item
4. Delete Item
5. Exit
Enter your choice: 5
Thank you for using the program!
```

Source Code:

```python
#CUETO, ALEXA JOYCE G
#TW23
#OOP and Exception
class Item:
    def __init__(self, itemID, itemName, itemDesc, itemPrice): #constructor
        self.itemID = itemID #self is the instance of item class
        self.itemName = itemName
        self.itemDesc = itemDesc
        self.itemPrice  = itemPrice


    def __str__(self): #string representation of the object
        return f"\n\t\tItem ID: {self.itemID}\n\t\tItem Name: {self.itemName}\n\t\tItem Description: {self.itemDesc}\n\t\tItem Price: {self.itemPrice}"


items ={}


def mainMenu():
    while True:
        print("\n\t\t--Item Management Application for Marketplace Items--")
        print("\n\t\t--Menu--")
        print("\t\t1. Add Item")
        print("\t\t2. Show All Items")
        print("\t\t3. Update Item")
        print("\t\t4. Delete Item")
        print("\t\t5. Exit")
```

```python
        choice = input("\t\tEnter your choice: ")

        if choice == "1":
            addItem()
        elif choice == "2":
            showAllItems()
        elif choice == "3":
            updateItem()
        elif choice == "4":
            deleteItem()
        elif choice == "5":
            print("\t\tThank you for using the program!")
            break
        else:
            print("\t\tInvalid choice. Try again.")


def addItem():
    try: #exception handling
        itemID =int(input("\n\t\tEnter ITEM ID (5 DIGITS): "))
#inputs ID from user
        if itemID in items:  #checks if the ID already exists
            print("\t\tItem ID already exists.")
            return None

        if len(str(itemID)) != 5: #checks if the ID is not 5
digits
            print("\t\tItem ID must be 5 digits.")
            return None
```

```python
        name = input("\t\tEnter Item Name: ")
        if name == "": #checks if the name is empty
            print("\t\tItem Name cannot be empty.")
            return None


        description = input("\t\tEnter Item Description: ")
        if description == "": #checks if the description is
empty
            print("\t\tItem Description cannot be empty.")
            return None


        price = float(input("\t\tEnter Item Price: PHP "))
        if price <= 0.00: #checks if the price is less than or
equal to zero
            print("\t\tItem Price must be greater than zero.")
            return None


        items[itemID] = Item(itemID, name, description, price)
#adds the item to the dictionary
        print("\t\tItem ", itemID, " added successfully.")

    except ValueError:
        print("\t\tInvalid input. Please enter a valid value.")
        return None


def showAllItems():
    if not items:
        print("\t\tNo items to show.") #checks if there are no
items to show
        return None
```

```python
    else:
        print("\n\t\t--Items--")
        for itemID in items:
            print(items[itemID]) #prints the items



def updateItem():
    print("\n\t\t--Items--")
    for itemID in items:
        print(items[itemID]) #prints the items


    itemID = int(input("\n\t\tEnter Item ID to update (5
DIGITS): "))
    if itemID not in items:
        print("\t\tItem ID does not exist.")
        return None


    if len(str(itemID)) != 5:
        print("\t\tItem ID must be 5 digits.")
        return None


    try:
        name = input("\t\tEnter new name [Leave blank to retain
current value]: ")
        if name:
            items[itemID].itemName = name


        description = input("\t\tEnter new description [Leave
blank to retain current value]: ")
        if description:
```

```python
            items[itemID].itemDesc = description


        price = input("\t\tEnter new price [Leave blank to
retain current value]: PHP ")

        if price:

            price = float(price)

            if price <= 0.00:

                print("\t\tItem Price must be greater than
zero.")

                return None

            items[itemID].itemPrice = price


        print("\t\tItem ", itemID, " updated successfully.")
    except ValueError:

        print("\t\tInvalid input. Please enter a valid value.")

        return None


def deleteItem():

    print("\n\t\t--Items--")

    for itemID in items:

        print(items[itemID]) #prints the items


    itemID =int(input("\n\t\tEnter Item ID to delete (5 DIGITS):
"))

    if itemID in items:

        del items[itemID]

        print("\t\tItem ", itemID, " deleted successfully.")

    else:

        print("\t\tItem ID does not exist.")

        return None
```

```python
    if len(str(itemID)) != 5:

        print("\t\tItem ID must be 5 digits.")

        return None


mainMenu()
```