Python Healthy Vending Machine

Time required: 90 minutes

- Comment each line of code as shown in the tutorials and other code examples.
- Follow all directions carefully and accurately.
- Think of the directions as minimum requirements.

Pseudocode

1. Write pseudocode or TODO for the exercise
2. Submit with the assignment

Program Requirements

We are going to create a vending machine in Python. Our vending machine will have snacks using a dictionary representing snack items with their names and prices.

Create a Python program named **vending_machine.py**

1. Use a main() function.
2. Import and use the **utils.py** module.
3. Create a dictionary with a minimum of 4 key value pairs at the beginning of the program, outside and above the main() function definition.
    a. name: price
2. Use the utils module to print a nice title block for your program.
4. **display_snacks()** function shows available snacks to the user.
    a. Print out the keys and values with a for loop.
5. **purchase_snack()** function handles the purchase process by taking the selected snack's key and display both it and the value.
    a. function prompts the user to select a snack by entering the corresponding name.
    b. Display the snack and price.

Example run:

```
+-------------------------------------+
|  Welcome to Bill's Vending Machine!  |
+-------------------------------------+
Available items:
Soda - $1.50
Chips - $1.00
Chocolate - $1.25
Candy - $0.75
Enter the item name to purchase (or 'q' to quit): Soda
You've selected: Soda - $1.50
Enter the item name to purchase (or 'q' to quit): Chips
You've selected: Chips - $1.00
Enter the item name to purchase (or 'q' to quit): Candy
You've selected: Candy - $0.75
Enter the item name to purchase (or 'q' to quit): q
Thank you for using Bill's vending machine.
Have a great day!
```

TODO:

This is one possible path to a solution.

```
# Vending machine simulation
import utils
# Dictionary of items available in the vending machine
items = {
}

# ------------------------- DISPLAY ITEMS --------------------------------
def display_snacks():

    # Iterate through the dictionary one item at a time

        # Print each item name and price

# ------------------------- PURCHASE ITEMS --------------------------------
def purchase_item(choice):
        print(f"Soda: ${items.get("Soda")})

# ------------------------------ MAIN -------------------------------------
def main():
    display_snacks()
    while True:
        user_choice = input(
            " Enter the item name to purchase (or 'q' to quit): "
        )
        if user_choice.lower() == 'q':
            print(" Thank you for using Bill's vending machine.”
            print(" Have a great day!")
            break
        else:
            choice = user_choice
            purchase_item(choice)
            print(" Invalid input. Enter a valid item number or 'q' to quit.")

# Run the vending machine simulation
main()
```

Challenges

In your submission, please indicate which challenges you implemented.

1. Add more items to your vending machine.
2. Prompt for money insertion, providing the snack or indicating insufficient funds.
3. Provide a total sale.

4. Advise the user when they purchase an unhealthy snack.
5. Use the Rich library to make your program more attractive.

Assignment Submission

1. Attach the pseudocode.
2. Attach the program files.
3. Attach screenshots showing the successful operation of the program.
4. Submit in Blackboard.