# The CoffeeMachine Program

from data import MENU

from art import logo

from art import cup

from functions import check\_resources\_and\_price

from functions import insert\_coins

resources = {

    "water": 300,

    "milk": 200,

    "coffee": 100,

}

used\_resources = {}

machine\_on = True

while machine\_on:

    print(logo)

    choice = ""

    # loop for enter a correct choice

    while choice not in MENU:

        choice = input("What would you like? Type espresso / latte / capuccino ")

        # This will give a report of the actual resources value

        if choice == "report":

            print(resources)

        # This will refill the resources

        elif choice == "refill":

            resources = {

                "water": 300,

                "milk": 200,

                "coffee": 100,}

        # This loop is going to repeat until user input a valid option

        elif choice not in MENU:

            print("Type a correct selection.")

    # When user input 'off' machine will turn off

    if choice == "off":

        machine\_on = False

        choice = {""}

    # if choice of the user is in the menu, then we take the item from the list MENU

    elif choice in MENU:

        # Choice will be the dictionary with ingredients and price

        choice = MENU[choice]

        # Here we call just the ingredients

        resources\_to\_use = choice["ingredients"]

    if machine\_on:

        coins = insert\_coins()

        result\_compare = (check\_resources\_and\_price(choice, resources, coins))

        result\_compare = str(result\_compare)

        # Sorry will be always present when resources or money are not enough

        if "Sorry " in result\_compare:

            print(result\_compare)

            coins = 0

        # If everything okay we will receive just the price of our selection

        else:

            result\_compare = (float(result\_compare)).\_\_round\_\_(2)

            change = (coins - result\_compare).\_\_round\_\_(2)

            print("Here you have! Enjoy.")

            print(f"Your change {coins} - {result\_compare} = {change}")

            used\_resources["water"] = resources["water"]-resources\_to\_use["water"]

            used\_resources["milk"] = resources["milk"]-resources\_to\_use["milk"]

            used\_resources["coffee"] = resources["coffee"]-resources\_to\_use["coffee"]

            # resources will be discounted and the other items will be emptied

            resources = used\_resources

            change = 0

            coins = 0

            result\_compare = 0

def check\_resources\_and\_price(choice, resources, coins):

    to\_check = choice

    ingredients = to\_check["ingredients"]

    cost = to\_check["cost"]

    if resources["water"] < ingredients["water"]:

        return "Sorry there is not enough water. Money refunded"

    elif resources["milk"] < ingredients["milk"]:

        return "Sorry there is not enough milk. Money refunded"

    elif resources["coffee"] < ingredients["coffee"]:

        return "Sorry there is not enough coffee. Money refunded"

    elif coins < cost:

        return "Sorry not enough money. Money refunded"

    return to\_check["cost"]

def insert\_coins():

    print("Please insert coins")

    quarters = 0.25 \* int(input("How many quarters? "))

    dimes = 0.10 \* int(input("How many dimes? "))

    nickles = 0.05 \* int(input("How many nickles? "))

    pennies = 0.01 \* int(input("How many pennies? "))

    inserted\_coins = quarters + dimes + nickles + pennies

    inserted\_coins.\_\_round\_\_(2)

    return inserted\_coins

# Data for the machine

MENU = {

    "espresso": {

        "ingredients": {

            "water": 50,

            "milk" : 0,

            "coffee": 18,

        },

        "cost": 1.5,

    },

    "latte": {

        "ingredients": {

            "water": 200,

            "milk": 150,

            "coffee": 24,

        },

        "cost": 2.5,

    },

    "cappuccino": {

        "ingredients": {

            "water": 250,

            "milk": 100,

            "coffee": 24,

        },

        "cost": 3.0,

    },

    "off": {},

}

logo = '''

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cup = '''

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