

```
class VendingMachine:

    def __init__(self):

        self.state = self.initial_state

        self.cans = {

            "PEPS": 50,

            "MDEW": 50,

            "DPEP": 50,

            "COKE": 50,

            "GATO": 50,

            "DCOK": 50,

            "MINM": 50,

            "TROP": 2

        }

        self.prices = {

            "PEPS": 30,

            "MDEW": 30,

            "DPEP": 50,

            "COKE": 20,

            "GATO": 60,

            "DCOK": 30,

            "MINM": 25,

            "TROP": 30

        }

        self.amount_entered = 0

        self.selected_drink = ""

        self.change = 0

    def initial_state(self):

        print("Welcome to the vending machine!")
```

```
self.display_menu()

self.state = self.waiting_for_drink
```

```
def waiting_for_drink(self):

    drink_code = input("Enter the four-letter code for your drink selection: ")

    if drink_code in self.prices:

        self.selected_drink = drink_code

        self.state = self.waiting_for_amount

    elif drink_code == "REFILL":

        self.refill_cans()

        self.state = self.initial_state

    else:

        print("Invalid drink selection. Please try again.")

        self.state = self.waiting_for_drink
```

```
def waiting_for_amount(self):

    self.amount_entered = int(input("Enter the amount of money you will feed: "))

    if self.amount_entered < self.prices[self.selected_drink]:

        print("Amount entered is not enough. Please enter a sufficient amount.")

    else:

        self.vend_drink()

        self.state = self.waiting_for_drink
```

```
def vend_drink(self):

    if self.cans[self.selected_drink] == 0:

        print("Sorry, the selected drink is out of stock. Please choose another drink.")

    else:

        self.cans[self.selected_drink] -= 1

        self.change = self.amount_entered - self.prices[self.selected_drink]
```

```
if self.change > 0:
    print("Please take your drink and change:", self.change)
else:
    print("Please take your drink.")
```

```
def refill_cans(self):
    for drink_code in self.cans:
        self.cans[drink_code] = 50
    print("All drinks have been refilled.")
```

```
def display_menu(self):
    print("Available drinks:")
    for drink_code, cost in self.prices.items():
        print(drink_code, "-", cost)
```

```
# Test the vending machine
machine = VendingMachine()
while True:
    machine.state()
```