

# Software Design Pattern: Assignment 4

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## **Design Pattern:**

The state design pattern has been used to implement the vending machine. The machine will always be in exactly one of the four following states:

1. Idle state (Initially or after serving a drink)
2. Refund state (Returning change or returning entered money if it is not enough for chosen drink)
3. Cash-in state (Receiving coins from user)
4. Serve state (Serving the drink of user's choice, provided he or she has entered enough money using accepted coins)

## **List of Assumptions:**

1. The user will only insert coins worth 10, 20 and/or 50 cents.
2. There are 20 coins each worth 10, 20 and 50 cents in the vending machine initially.
3. There are 5 cups of coffee and 5 cups of cappuccino in the machine initially.
4. There are no refill supplies i.e. once 5 cups of the same drink is taken, no more of that drink can be ordered.