**Vending Machine Design**

Problem Statement

Design a Vending Machine that has chocolates, drinks and chips. User can enter any number of coins (nickel, dime, quarter, cent and dollar) and then select only one item from the vending machine. The vending machine should return the selected item to the user with the appropriate changes. If the coins do not suffice the price of selected item, display error message and drop all the coins back to the user.   
*Note: Make extensive use of SOLID principles.*

**Solution:**

Let’s try to capture classes in problem statement.

Probable classes:

1. VendingMachineService: Controller or main class to represent the vending machine
2. Drinks, Chips and Chocolates can be kept inside an enum since they don’t have specific property. Also, using enum, we can specify the prices for each.
3. CoinCollector: A class to collect all the coins user inputs to the machine before sending the order to vending machine.
4. OutputClass: A class to return item as well as changes from vending machine after a successful order. This will have a string error message too.

The CoinCollector and OutputClass can be derived from a common base class since they have most of the properties in common.