Homework 9 – State Pattern

This exercise will give you experience using the State design pattern. The state machine below describes the behavior of a gumball machine.

The inputs to the gumball machine are:
1) Add Gumballs – put more gumballs in the bowl
2) Insert Quarter – put a quarter in the slot
3) Remove Quarter – remove the quarter from the slot
4) Turn Handle – turn the handle

The state of the gumball machine consists of two properties:
1) Gumballs – the number of gumballs in the bowl
2) Money – the amount of money in the machine

Download the file named `gumball.zip` from the course web site. This file contains two classes, `GumballMachine` and `GumballMachineTest`. Use the State design pattern to complete the implementation of the `GumballMachine` class so that it passes the unit tests in `GumballMachineTests`.

Create a zip file containing your modified source code, and submit it online. The TA will grade your solution by running your program and inspecting your source code.