This is a Verilog implementation of the soda dispenser example, which uses both a datapath and controller. The soda dispenser shows up in the lecture 7 slides, and is described in Ch. 5 of the textbook (p. 248), and example 5.3 in the textbook (p. 257), which also shows diagrams of the datapath, controller, and their connections.

To test the datapath, run these commands:
iverilog -g2005 -Wall -Wno-timescale -o SodaDatapathTest SodaDatapath.t.v
vvp SodaDatapathTest
gtkwave SodaDatapathTest.vcd

To test the controller, run these commands:
iverilog -g2005 -Wall -Wno-timescale -o SodaControlTest SodaControl.t.v
vvp SodaControlTest
gtkwave SodaControlTest.vcd

To test the complete soda dispenser, run these commands:
iverilog -g2005 -Wall -Wno-timescale -o SodaTATest SodaTA.t.v
vvp SodaTATest
open -a gtkwave SodaTATest.vcd