

## HW1.3

To catch the bugs, I wrote a program `vending-simple/debug/input_gen.py`, to generate random input patterns. The patterns are restricted to be legal inputs. And I find every time the machine when the input money is enough but the machine cannot make the exchange, the monitor `p` is triggered. Meaning that the machine is making faulty refund to the customer. After I inspected the code about the refund process, I found that at line 236 in the original code, the machine should go to the state ``SERVICE_BUSY` instead of `SERVICE_ON` to make the correct refund to the customer. After I fixed this bug, the program does not triggers the monitor anymore.