

```

97  -- if sum >= price, else alarm will be set to '1', which causes
98  -- alarm_count to be increased by one on every clock until MSB
99  -- of alarm_count equals '1' which resets alarm to '0'.
100  -----
101
102  process(coin1, coin2, coin5, buy, clock)
103  begin
104      if rising_edge(clock) then
105          if Reset = '1' then
106              sum <= "000000";
107          elsif coin1 = '1' then
108              sum <= sum + 1;
109          elsif coin2 = '1' then
110              sum <= sum + 2;
111          elsif coin5 = '1' then
112              sum <= sum + 5;
113          elsif alarm = '1' then
114              alarm_count <= alarm_count_next;
115              if alarm_count(10) = '1' then
116                  alarm <= '0';
117                  alarm_count <= "000000000000";
118              end if;
119          elsif buy = '1' then
120              if sum >= price then
121                  sum <= sum - price;
122              elsif sum < price then
123                  alarm <= '1';
124              end if;
125          end if;
126          sum_out <= sum(5 downto 0);
127          price_out <= price(5 downto 0);
128      end if;
129      alarm_out <= alarm;
130  end process;
131
132  end Behavioral;
```