

1 Digital System Design with High-Level Synthesis for FPGA

Sequential Circuits

Vending Machine-Vitishls: Quiz Solution

www.highlevel-synthesis.com

The following code answers the quiz.

```
int main() {  
  
    int status = 0;  
    bool    nickel_in;  
    bool    dime_in;  
    bool    quarter_in;  
    bool    candy_out;  
    bool    nickel_out;  
    ap_uint<2> dime_out;  
    bool    thanks_in;  
  
    put_coin(0, 0, 0); // no coin  
  
    put_coin(1, 0, 0); // nickel  
    put_coin(1, 0, 0); // nickel  
    put_coin(1, 0, 0); // nickel  
    put_coin(0, 0, 1); // quarter  
  
    return status;  
}
```

This would be the waveform after RTL/C co-simulation.

