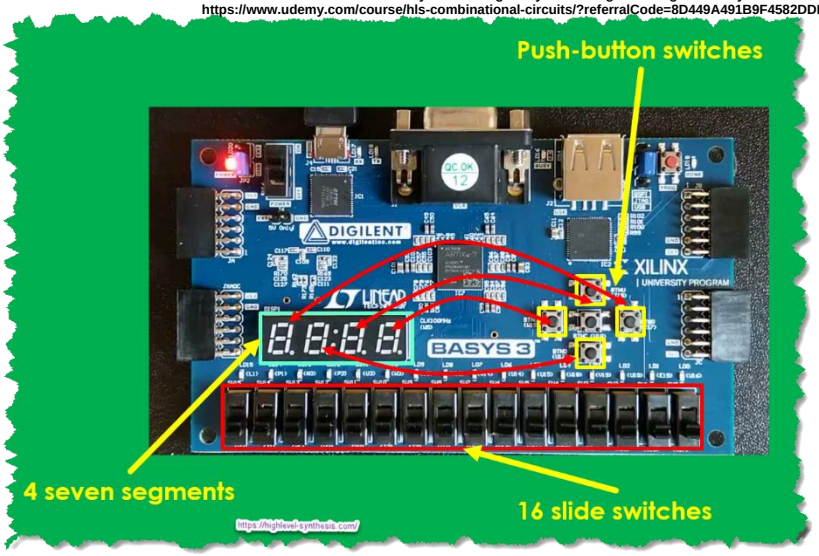

This is the code:

```
void four_digit_7segment(uint16 in_binary,
                         uint4 pushbutton,
                         uint8 *code,
                         uint4 *anodes) {
#pragma HLS INTERFACE ap_none port=in_binary
#pragma HLS INTERFACE ap_none port=pushbutton
#pragma HLS INTERFACE ap_none port=code
#pragma HLS INTERFACE ap_none port=anodes
#pragma HLS INTERFACE ap_ctrl_none port=return

  uint16 packed_bcd;
  packed_bcd = binary2bcd_double_dabble(in_binary);

  if (pushbutton[0] == 0b1) {
    *code   = digit_7segment_encode(packed_bcd(3, 0));
    *anodes = 0b1110;
  } else if (pushbutton[1] == 0b1) {
    *code   = digit_7segment_encode(packed_bcd(7, 4));
    *anodes = 0b1101;
  } else if (pushbutton[2] == 0b1) {
    *code   = digit_7segment_encode(packed_bcd(11, 8));
    *anodes = 0b1011;
  } else if (pushbutton[3] == 0b1) {
    *code   = digit_7segment_encode(packed_bcd(15, 12));
    *anodes = 0b0111;
  } else {
    *code   = digit_7segment_encode(packed_bcd(3, 0));
    *anodes = 0b1110;
  }
}
```