

```

18  #include <xc.h>
19  #define _XTAL_FREQ 20000000 // 20 MHz
20  void main(void) {
21      // Initialize PORTD
22      TRISD = 0x00; // Set PORTD as output
23      PORTD = 0x00; // Clear PORTD initially
24      while(1)
25      {
26          // Pattern 1: RD7 -> HIGH, RD1 -> LOW
27          PORTD = 0x80; // 1000 0000
28          __delay_ms(3000);
29          // Pattern 2: RD7 -> LOW, RD1 -> HIGH
30          PORTD = 0x02; // 0000 0010
31          __delay_ms(3000);
32          // Pattern 3: RD7 -> HIGH, RD1 -> HIGH
33          PORTD = 0x82; // 1000 0010
34          __delay_ms(3000);
35          // Pattern 4: RD7 -> LOW, RD1 -> LOW
36          PORTD = 0x00; // 0000 0000
37          __delay_ms(3000);
38      }

```

Figure 1: Class 1 Task Program Code