Class 2 Task Program Pull Up Method

```c
uint8_t val;  // Declare an 8-bit unsigned variable to store the input value from PORTC
void main(void)
{
    TRISC = 0x0F;  // Configure lower nibble (RC0-RC3) as input (1), upper nibble (RC4-RC7) as output
    TRISD = 0x00;  // Configure PORTD as output (all bits set to 0 for output)
    PORTC = 0x00;  // Clear PORTC (ensure all outputs are LOW initially)

    while(1)  // Infinite loop to continuously read inputs and update outputs
    {
        val = PORTC;  // Read the value from PORTC (RC0-RC3 are used as input)
        switch (val)  // Check the input value and determine the corresponding output on PORTD
        {
            case 0x0E:  // If RC0 is LOW (button pressed), the input will read 1110 (0x0E)
            {
                PORTD = 0x10;  // Set RD4 HIGH (0001 0000 in binary)
                break;
            }
            case 0x0D:  // If RC1 is LOW (button pressed), the input will read 1101 (0x0D)
            {
                PORTD = 0x04;  // Set RD2 HIGH (0000 0100 in binary)
                break;
            }
            case 0x0B:  // If RC2 is LOW (button pressed), the input will read 1011 (0x0B)
            {
                PORTD = 0x14;  // Set RD4 and RD2 HIGH (0001 0100 in binary)
                break;
            }
            case 0x07:  // If RC3 is LOW (button pressed), the input will read 0111 (0x07)
            {
                PORTD = 0x00;  // Turn OFF all PORTD outputs
                break;
            }
            default:  // If no valid input condition is met (all buttons released)
            {
                PORTD = 0x00;  // Keep PORTD OFF
            }
        }
    }
    return;  // This statement is never reached due to the infinite loop
}
```