3. analog input, input for a comparator, change notification, digital input or output. It is not 5v tolerant

4. Input TRISC=1
Output TRISC=0

5. 0x00C3

6.
SYSCLK: used to clock the cpu
PBCLK: used to clock the peripherals
PORTA to PORTG: Digital IO ports, PORTB is analog
Timer1 to Timer5: Can count or keep time based of PBclk
10-bit ADC: analog to digital converter
PWM OC1-5; generate digital pules trains to drive motors
Data RAM: faster memory which can be written to by the cpu
Program Flash Memory: used to hold program memory
Prefetch Cache Module: used to look ahead and gather data from program flash

7. RTCC can operate when PBCLK is asleep, PortA-PortG are on SYSCLY, io ports, USB, Ethernet, DMA, ICD, WDT, CN among others are not on PBCLK

8. it can't distinguish anything less than 3.3/2^10 V differences

9. 256bytes

10. This is because the preface cache must take 16 bytes per clock cycle which is 128 bits

11. it could be considered with a pull up resistor to bring the high voltage to 4v

12. Ram can go from 0x00000000 to 0x1D000000 at max this is 486539264 bytes

Flash can at max go from 0x1D000000 to 0x1F800000 this is 41943040 bytes

13. a. bit 13-12 FPBDIV<1:0>: Peripheral Bus Clock Divisor Default Value bits
11 = PBCLK is SYSCLK divided by 8
10 = PBCLK is SYSCLK divided by 4
01 = PBCLK is SYSCLK divided by 2
00 = PBCLK is SYSCLK divided by 1

bit 23 **FWDTEN:** Watchdog Timer Enable bit
1 = The WDT is enabled and cannot be disabled by software
0 = The WDT is not enabled; it can be enabled in software

bit 22-21 **Reserved:** Maintain as '1'

bit 20-16 **WDTPS<4:0>:** Watchdog Timer Postscale Select bits
10100 = 1:1048576
10011 = 1:524288
10010 = 1:262144
10001 = 1:131072
10000 = 1:65536
01111 = 1:32768
01110 = 1:16384
01101 = 1:8192
01100 = 1:4096
01011 = 1:2048
01010 = 1:1024
01001 = 1:512
01000 = 1:256
00111 = 1:128
00110 = 1:64
00101 = 1:32
00100 = 1:16
00011 = 1:8
00010 = 1:4
00001 = 1:2
00000 = 1:1
All other combinations not shown result in operation = '10100'

b.

c.

2-0 to 011
9-8 to 10

14. Given the max amperage we will want to draw is .2A we use ohms law to say v/I=R where V= 5. Given this R = 25 ohms minimum

15. The NU 32 can be used anywhere from 2.3 v to 9v because it has a 5v regulator but it will overheat over 9V

16. The two LEDs, LED1 and LED2, are connected at one end by a resistor to 3.3 V and the other end to digital outputs RF0 (58 on pic32) and RF1 (59 on pci32)

The USER and RESET buttons are attached to the digital input RD7 (55) and MCLR(7) pins, respectively