Notes

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January 28, 2020

1 Example of Port Configuration

Write a function that reads the low nibble from P6 into a byte (use internal pull-up resisitors), and another function that outputs the complememnt of the low nibble of its input argument on P47-4.

1. Use P6SEL and masking to set the last 4 bits in the register to zero

```
P6SEL &= ~(BIT3|BIT2|BIT1|BIT0);
```

2. Set P6DIR last 4 bits to zero (Input)

```
P6DIR &= ~(BIT3|BIT2|BIT1|BIT0);
```

3. Set P6REN and P6OUT last 4 bits to 1 for pull-up resistors

```
P6REN |= (BIT3|BIT2|BIT1|BIT0);
P6OUT |= (BIT3|BIT2|BIT1|BIT0);
```

4. Set P4SEL first 4 bits to 0 and P4DIR first 4 bits to 1

```
P4SEL &= (BIT3|BIT2|BIT1|BIT0);
P4DIR |= (BIT7|BIT6|BIT5|BIT4);
```

5. Complement function

```
char in _P6(){
    /*Read in from port 6. Save only the low */
    char inbits;
    inbits = P6IN & 0x0F;

    return(inbits);
}

void out_comp_P4(char inByte) {
    char outbits;
    /*Complememnt input values, inByte*/
    outbits = ~inByte;
    /*Shift low nibble left to bits 7 4*/
    outbits = outbits << 4;
    /*output on P47 4*/
    P4OUT = (outbits & 0xF0) | (P4OUT & 0x0F);
}
```

2 Input or Output?

In order to tell which pins and port a device is (Like the LEDs), you must chack board schematics or look through demo project.
When there is a voltage applied (Logic level 1), the LED will light. When it is set to 0, the LED will turn off.

```
void initLeds(void) {
/*Configure LEDs as output, initialize to logic low*/
    P6SEL &= ~(BIT4|BIT3|BIT2|BIT1);
    P6DIR |= (BIT4|BIT3|BIT2|BIT1);
    P6OUT &= ~(BIT4|BIT3|BIT2|BIT1);
```