Lab 2 Prelab:

1. Suppose you want to configure Port B so that all 8 of its pins are configured as outputs. Which I/O register is used to make this configuration, and what 8-bit binary value must be written to configure all 8 pins as outputs?
    a. The I/O register used to configure the pins as outputs is DDRB (data direct register B). The 8-bit binary value that must be written to configure all 8 pins as outputs would need to be 0b11111111.
2. Suppose all 8 of Port D's pins have been configured as inputs. Which I/O register must be used to read the current state of Port D's pins?
    a. The register that must be used is the PIND register to read the current state of Port D's pins.
3. Does the function of a PORTx register differ depending on the setting of its corresponding DDRx register? If so, explain any differences.
    a. Yes the function of a PORTx register differs depending on the setting of its corresponding DDRx register. The function a PORTx register differs because if the DDRx register is set for output then the PORTx that corresponds to it will be used as the output data line. If the DDRx register is set for input then a 1 is written to the PORTx and it will activate a pull-up resistor for low-power consumption.