

Lab 2 Pre Lab

- 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?

The I/O register used to make this configuration is DDRB. DDRB is used to configure the respective PORT as either an input or output.

- 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?

The I/O register used to read the current state of Port D's pins is the PIND register. PIND is used to read data from the port pins.

- 3) Does the function of a PORTx register differ depending on the setting of its corresponding DDRx register? If so, explain any differences.

Yes, the function of a PORTx register differs based on the setting of its corresponding DDRx register. This is based on the value the DDRx register is set to. If the DDRx register is 1, the PORTx register will store outputted values on the pins of PORTx. If the DDRx register is 0, the PORTx register will write values to the PORTx register of the port.

Sources

https://exploreembedded.com/wiki/AVR_I/O_Register_Configuration