Week 6 Milestone

Begin the TWI API. You will begin working on the TWI. The functions needed are the following:

void TWIinit(void); // This function will initialize the TWBR register

uint8_t TWIaction(uint8_t command); // This function is needed by every TWI operation.
// It performs operations that must be performed for each
// operation, such as clearing TWINT and enabling the
// TWI system. In addition, it performs any other
// command needed by this particular operation. This
// command is passed into the function as a uint8_t.
// It the returns the status (TWSR) of that operation.

uint8_t TWIread(uint8_t regNumber); // This function is used to read the contents of any of
// the camera's registers. It returns the 8-bit contents of the
// specified register.

void TWIwrite(uint8_t regNumber, uint8_t value); // This function takes the value passed in
// and writes it to the specified register. It returns nothing.

The following are the commands that are sent serially by the user to allow reading and writing of the camera registers they will be used in week 7 to demonstrate the correct operation of the TWI API:

rdCamReg regNumber
wrCamReg regNumber value

The register number (RegNumber) and the value are to be entered in hexadecimal. The read command should print a message such as

Camera register = (regNumber in hex) Register value = (value read in hex)

What is expected in week 6?

In week 6, I expect that the TWI API will be written and tested. You will demonstrate this by printing out appropriate statements at various points as an operation is performed (See the EEPROM example that was discussed in lecture).

What is expected in week7?

Your program in week 7 should allow any of the commands that have been implemented so far such as PAN, TILT, rdIO, wrIO along with the two new commands described above to be performed.