Parallel Port Driver Development

I am trying to develop a simple driver for the parallel port on my PC. Using Visual studio.net

My Requirements (use Assembly Language)

My assignment consists of developing two sets of software. The first will consist of 10 functions that will serve as a simple driver for the parallel port on the PC. The second will be a simple application program that uses the driver you developed.

The driver code should consist of 10 separate functions. Each of these functions should be callable from a C/C++ application program. Each of these functions should have an assembly code block that handles the low level IO to the parallel port. Following are the names of each of these functions and a short description of what they should do.

readData – This function has 1 integer parameter (address) and it returns a BYTE of data. This function should read the 8 bit data on the parallel port and return this value to the calling function.

My Idea of reading data from the parallel port

```
MOV  AL,20H
MOV  DX,37AH
OUT  DX,AL
MOV  DX,378H
IN   AL,DX
```

writeData – This function has 2 parameters (int size address and BYTE size data) and it does not return anything. This function should write the BYTE of data to the parallel port. All other pins on the parallel port should remain unchanged.

My Idea of sending data to the parallel port

```
MOV  AL,00H
MOV  DX,37AH
OUT  DX,AL
MOV  AL,WRITE_DATA
OUT  DX,AL
```

setStrobe – This function has 1 integer parameter (address) and does not return any data. This function should set the strobe pin (pin 1) high on the parallel port. All other pins on the parallel port should remain unchanged.

clearStrobe – This function has 1 integer parameter (address) and does not return any data. This function should set the strobe pin (pin 1) low on the parallel port. All other pins on the parallel port should remain unchanged.

setALF – This function has 1 integer parameter (address) and does not return any data. This function should set the auto line feed pin (pin 14) high on the parallel port. All other pins on the parallel port should remain unchanged.

clearALF – This function has 1 integer parameter (address) and does not return any data. This function should set the auto line feed pin (pin 14) low on the parallel port. All other pins on the parallel port should remain unchanged.

setInit – This function has 1 integer parameter (address) and does not return any data. This function should set the init (pin 16) high on the parallel port. All other pins on the parallel port should remain unchanged.

clearInit – This function has 1 integer parameter (address) and does not return any data. This function should set the init (pin 16) low on the parallel port. All other pins on the parallel port should remain unchanged.

setSelect – This function has 1 integer parameter (address) and does not return any data. This function should set the select (pin 17) high on the parallel port. All other pins on the parallel port should remain unchanged.

clearSelect – This function has 1 integer parameter (address) and does not return any data. This function should set the select (pin 17) low on the parallel port. All other pins on the parallel port should remain unchanged.

The application code should consist of 1 main function. This main function will be used to test each of the driver functions. This main function should prompt the user for one of ten options so that each driver function could be exercised. For example, when the user decides to test the readData driver function, the program should prompt the user for a port address, and then print out the result of the readData function to the screen. The other functions should have similar appropriate functionality.