Assignment 4

1. What is the difference between assembly language and machine language?

2. Using a two address machines to compute

$$X = (A + B * C)/(D - E * F)$$

The instructions available for use are as follows:

2 Address
MOVE(X <- Y)
ADD (X <- X + Y)
SUB (X <- X - Y)
MUL (X <- X * Y)
DIV (X <- X/Y)

3. Assume the following instruction is executed what would the result be. Would any flags change if so specify?

```
MOV AX,FFFF
ADD AX, 0001
```

Debug Excercise

Step 1. Start -> Run -> Type "CMD" and press enter.
Step 2. Create a new file text file in your current directory using the command "edit hello.txt"
Step 3. Type "Hello World located in memory."
Step 4. Press ALT+F and select save from the drop down menu
Step 5. Press ALT+F and select Exit
Step 6. Start debug and load the text file by using "debug hello.txt"

Question 1. Using debug dump the first 128 bytes of memory. Take a screen shot of the results.
Question 2. Using the enter command "-e" replace the word “world” with white space (ASCII code 20 in hex). Take a screen shot when complete of dump.

Question 3. Write the changes back to the file using debug. If you need help finding the command type "?" in the debug prompt. Show a screen shot using the command
Question 4. Display the current status of your registers. Take a screen shot.
Question 5. Write a brief description on the purpose of each register.