Lab 04 Tasks

Task 01

What errors are present in the following?

```
MOV AX 3d
MOV 23, AX
MOV CX, CH
MOVE AX, 1h
ADD 2, CX
ADD 3, 6
INC AX, 2
```

Task 02

Store the ASCII codes for starting three letters of your name in a register.

Task 03

Use following declarations:

```
varB BYTE +10
varW WORD -150
varD DWORD 600
```

Now move the value of each variable into EAX, EBX and ECX registers respectively. The output window should show the following declarations. Like:

```
+10
-150
+600
```

Hint: use the CRLF procedure to print each declaration in new line.

Task 04

Implement the following high-level mathematical equations into assembly language using x86 general purpose registers.

1. EAX = 89 + 75Fh – 46o – 28 + 1101b
2. EAX = val1 + val2 – 654h + val3

```
val1 DWORD 25h
val2 BYTE 36o
val3 WORD 20d
```

Task 05

Write a program which declares a symbolic constant named `SecondsInDay` using the equal-sign directive and assign it an arithmetic expression that calculates the number of seconds in a 24- hour period.

Task 06

Let `A = 0FF10h` and `B = 0E10Bh`, you need to write an assembly language code to swap the contents.

Task 07

Use this data for the following questions:

```
.data
     val1 BYTE 10h
     val2 WORD 8000h
     val3 DWORD 0FFFFh
     val4 WORD 7FFFh
```

- Write an instruction that increments `val2`.
- Write an instruction that subtracts `val1` from `val3`.
- Write instructions that subtract `val4` from `val2`.