Lab 04 Tasks

Task 01

What errors are present in the following?

```
MOVE EBX, 5h
INC CX, 5
MOV 10h, AX
MOV DX, DL
ADD 5, BX
MOV EAX 45d
ADD 5, 5
```

Task 02

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

Task 03

Use following declarations:

```
var1 BYTE +56
var2 WORD -300
var3 DWORD +500
```

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

```
+56
-300
+500
```

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 = 90 + 65Eh – 76o – 45 + 11010b`
2. `EAX = val1 - val2 – 64h + val3`

```
val1 DWORD 15h
val2 BYTE 57o
val3 WORD 100d
```

Task 05

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

Task 06

Let `A = 0FF1Ah` and `B = 0EE0Ah`, 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 0FFFEh
     val4 WORD 7FFEh
```

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