LAB TASKS

1. Convert the following high-level instruction into Assembly Language:
   x = (x+1) – (y-1) + y
2. Write a program to find area of a square. Declare all necessary variables for the program (give arbitrary values to the variables).
3. Write a program to find area of a rectangle. Declare necessary variables *length* & *width* for the program (assign arbitrary values to the variables).

LAB#04 Assignment

1. Write a program in assembly language that implements following expression:
   (Hint: Immediate values—uses a numeric literal expression)

   AEX = imm8+val2 – val3 +val1-imm8
   - Use EQU to assign values to imm8
   - Use these data definitions:
     val1 word 8
     Val2 word 15
     Val3 word 20
2. 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.
3. Write a program to find area of a triangle. Declare necessary variable *side* for the program (assign any arbitrary value to the variable).
4. Write a program that perform the multiplication of two number using MUL instruction. Note down the values of flags
5. Write a program that perform the division of two number using DIV instruction. Note down the values of flags
6. Use this code for the following questions:

```
.data
Val1 BYTE 10h
Val2 WORD 8000h
Val3 DWORD 0FFFFh
Val4 WORD 7FFFh
```

   i. Write an instruction that increments val2.
   ii. Write an instruction that subtracts val3 from EAX.
   iii. Write instructions that subtract val4 from val2.
   iv. If val2 is incremented by using the INC instruction, note down the values of flags.
   v. If val4 is incremented by using the INC instruction, note down the values of flags.
   vi. If val1 is decremented by using the DEC instruction, note down the values of flags.
   vii. If val3 is decremented by using the DEC instruction, note down the values of flags.