Assignment on Intermediate Code Generation:

Write the YACC program to implement the Syntax-Directed definition for translating ***assignment statements, if statements, if-else statements, while statements*** to three-address code. The assignment statements need to be type checked. Use quadruple-record structure for the representation of three-address code. The three address statements have to be sent to an output file.

Quadruple is a record structure with four fields for the three-address statements.

As for example: **a = b * - c**

Label	**op**	**Arg1**	**Arg2**	**Result**
00	**uminus**	**c**		**T1**
01	*	**b**	**T1**	**T2**
02	=	**T2**		**a**

Here T1, T2 … are the compiler generated temporary names.

The three address statements might be sent to an output file. Contents of the file should be:

```
00  T1 = - c
01  T2 = b * T1
02  a = T2
03
```

Assignments On Code Generation:

Write a program that will read the Intermediate Representation (three address statements) for ***assignment statements, if statements, if-else statements*** and ***while statements*** one by one and generate the assembly code for a target machine. The target code generation scheme follows the code generation strategy given in: A. V. Aho, R. Shethi, J.D. Ullman, "Compilers, principles, techniques and Tools ", pp 535 – 541. For code generation, the instruction set of 8085 / 8086 microprocessor is to be used.