Boolean Expressions

Each Boolean expression controls the flow of the program by adding If-Goto operations. Proper code needs to be generated for Boolean Assignments and Control Flow Statements.

Sample One

$\text{var} = \text{true} \;\&\&\; (3 > \sim 6 \;||\; !\,\text{var});$

$t = 3;$

An Accepted Output

goto L_0;

$L_0 : T_0 = \sim 6;$

if$(3 > T_0)$ goto L_1;

goto L_2;

$L_2 : T_1 = !\,\text{var};$

if(T_1) goto L_1;

goto L_3;

$L_1 : \text{var} = \text{true};$

goto L_4;

$L_3 : \text{var} = \text{false};$

$L_4 : t = 3;$

Sample Two

```
a = 3;
if(a > 3){
        while(a > 5 + 2 × 3 && false){
                var = var + 1;
        }
}else{
        var = 4;
}
var = 3;
```

An Accepted Output

```
a = 3;
if(a > 3) goto L0;
goto L1;
L0 : L3 : T0 = 2 × 3;
T1 = 5 + T0;
if(a > T1) goto L5;
goto L6;
L5 : goto L6;
L7 : var = var + 1;
goto L3;
L6 : goto L2;
L1 : var = 4;
L2 : var = 3;
```