For the given grammar,

Semantic actions are added to assignment , read, print ,if else and while statements. 4 variables are used to implement labels and temporary variable generation. The four variables are as follows:

1. Label : Used to keep count of label numbers already used.
2. Num_count : Keep count of temporary variables already used
3. While label: to keep track of last while loop label (In case on nested while, most recent while loop.)
4. Else label: to keep track of else label to be used. (Sing the Goto statement is printed in the ifStmt which requires else label. Hence else label is stored to use it in elseStmt productions.)

Example:

Input:

```
global

        x := y + 5;
        z := x * 2;
        a := x + z;

        print x;
        read y;

        while x > y:
                r := x + 1;
                while a > b:
                        s := y + 2
                end
        end;

        if awe <> qwe or  qwe + abc > 50 and abc  = 10:
                print c;
                if b < 10: print d else print e end;
                print q
        else
                print a;
                print b
        end

end
```

Output:

```
aneri@DESKTOP-64GOF59:/mnt/d/semester7/cd_lab/cd_lab10$ ./a.out

3 Address Code:

t_0 = y + 5
x = t_0
t_1 = x * 2
z = t_1
t_2 = x + z
a = t_2
print x
t_3 = Read y
L_0 : t_4 = x > y
If !t_4 goto L_1
t_5 = x + 1
r = t_5
L_2 : t_6 = a > b
If !t_6 goto L_3
t_7 = y + 2
s = t_7
goto L_2
goto L_0
t_8 = awe != qwe
t_9 = qwe + abc
t_10 = t_9 > 50
t_11 = t_8 or t_10
t_12 = abc == 10
t_13 = t_11 and t_12
t_14 = t_13
If !t_14 goto L_4
print c
t_15 = b < 10
t_16 = t_15
If !t_16 goto L_5
print d
goto L_6
L_5 : print e
print q
goto L_7
print a
print b
Program End
```