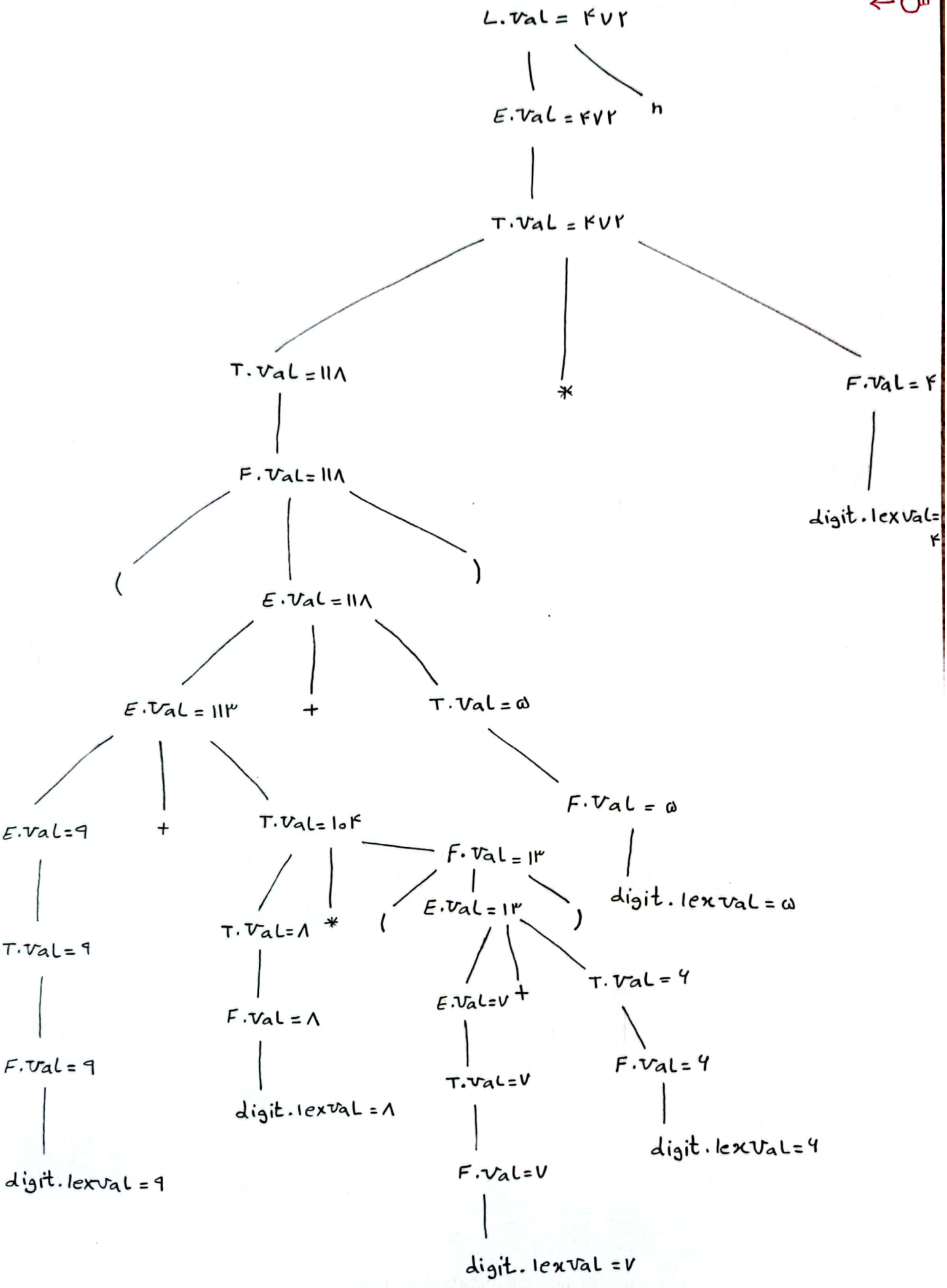
حوری دهش ۹۸۲۱۴۱۳

س۱ ←

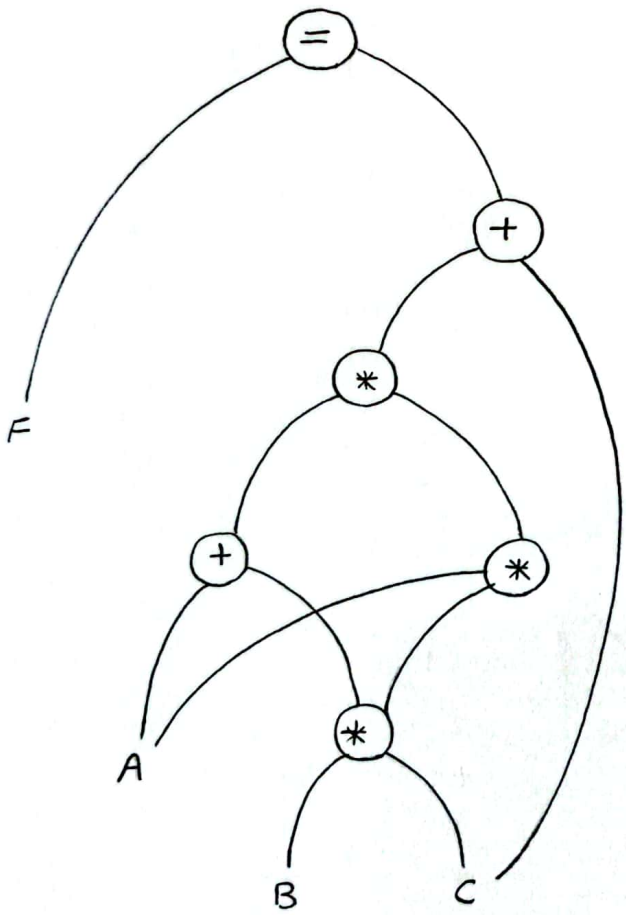


CamScanner

س٢←

	production	semantic rules
1)	$S \rightarrow L_1 . L_2$	$S.val = L_1.val + L_2.val \;/\; L_2.f$
2)	$S \rightarrow L$	$S.val = L.val$
3)	$L \rightarrow L_1 B$	$L.val = L_1.val * 2 + B.val$ $L.f = L_1.f * 2$
4)	$L \rightarrow B$	$L.val = B.val$ $L.f = 2$
5)	$B \rightarrow 1$	$B.val = 1$
6)	$B \rightarrow 0$	$B.val = 0$

س٣←



CamScanner

Triple:

address	operation	arg1	arg2
0	+	z	2
1	param	(0)	
2	param	x	
3	call	∓	2
4	*	c	d
5	[] =	b	i
6	-	(5)	(4)
7	+	(6)	(3)
8	[] =	a	i
9	=	(8)	(7)

Quadruple:

address	operation	arg1	arg2	result
0	+	z	2	t1
1	param	t1		
2	param	x		
3	call	∓	2	t2
4	*	c	d	t3
5	[] =	b	i	t4
6	-	t4	t3	t5
7	+	t5	t2	t6
8	[] =	a	i	t7
9	=	t6		t7

CamScanner

س۳ ←

الف)

L_2 : if $x > 0$ goto L_4

goto L_1

L_4 : if $x < 100$ goto L_3

goto L_1

L_3 : $x = x + 1$

L_5 : if $x > 20$ goto L_4

goto L_7

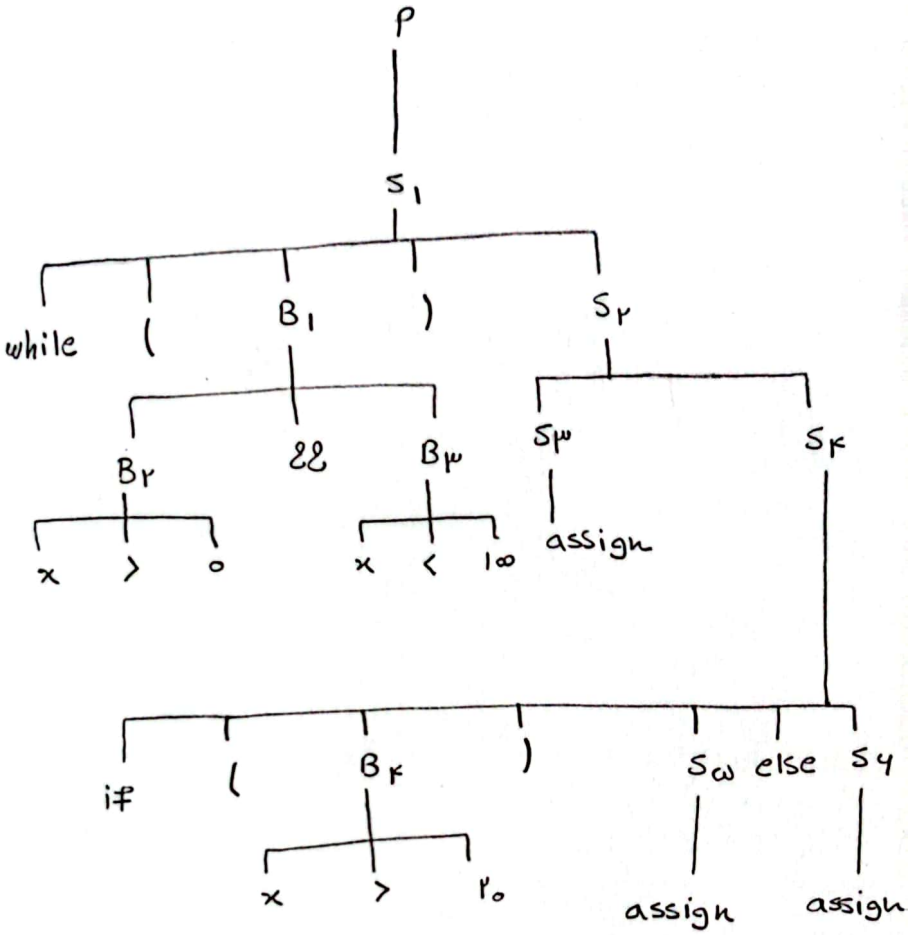
L_4 : $x = x + 2$

~~goto L_5~~

L_7 : $x = x + 3$

goto L_3

L_1 :



ب)

begin = new label ( )

B.true = begin

B.False = S.next

S.code = label (begin) || S_1.code || B.code || gen ('goto' begin)

CamScanner

س ۶ →

الف)

B_1: $i = 1$

goto B_2

B_2: $j = 1$

goto B_3

B_3: $t_1 = (i << 3) + 2 * i$

$t_4 = t_1 + j - 88$

$a[t_4] = 0.0$

$j = j + 1$

if $j <= 1$ goto B_3

else goto B_4

B_4: $i = i + 1$

if $i <= 10$ goto B_2

else goto L

ب)

$dp = 0$

$i = 0$

L: $t_1 = i * 8$

$T_2 = A[t_1]$

$t_4 = B[t_1]$

$t_5 = T_2 * t_4$

$dp = dp + t_5$

$i = i + 1$

if $i < n$ goto L

CamScanner