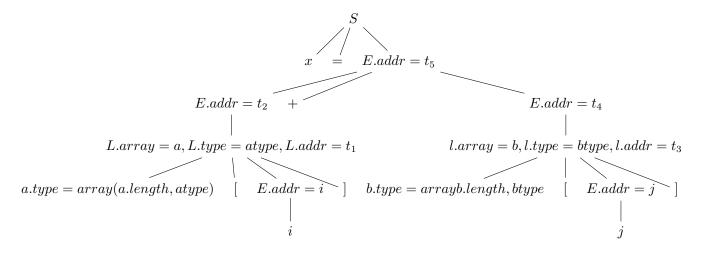
第六章第二次作业

6.3.1 解: 标识符和相对地址如下:

line	id	type	offset	Env
1)	x	float	0	1
2)	x	float	0	2
2)	y	float	8	2
2)	p	record()	8	1
3)	tag	int	0	3
3)	x	float	4	3
3)	y	float	12	3
3)	q	record	24	1

6.4.3 解: 1) x = a[i] + b[j] 的语法分析树如下:



三地址代码:

$$t_1 = i * awidth$$

$$t_2 = a[t_1]$$

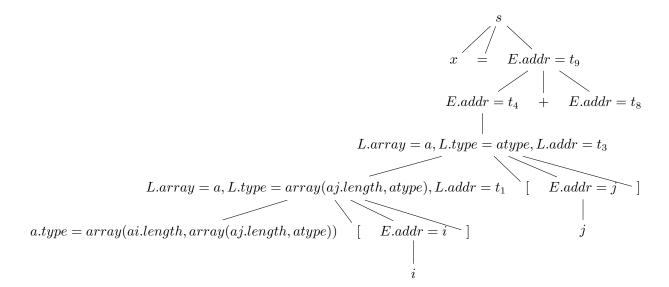
$$t_3 = j * bwidth$$

$$t_4 = b[t_3]$$

$$t_5 = t_2 + t_4$$

$$x = t_5$$

2) x = a[i][j] + b[i][j] 的语法分析树如下:



 $E.addr = t_8$ 接下面:

$$E.addr = t_{8}$$

$$L.array = b, L.type = btype, L.addr = t_{7}$$

$$L.array = b, L.type = array(bj.length, btype), L.addr = t_{5} \quad [\quad E.addr = j \quad]$$

$$b.type = array(bi.length, array(bj.length, btype)) \quad [\quad E.addr = i \quad] \quad j$$

三地址代码:

$$t_1 = i * ai.width$$

 $t_2 = j * aj.width$
 $t_3 = t_1 + t_2$
 $t_4 = a[t_3]$
 $t_5 = i * bi.width$
 $t_6 = j * bj.width$
 $t_7 = t_5 + t_6$
 $t_8 = b[t_7]$
 $t_9 = t_4 + t_8$
 $x = t_9$

6.5.1 解:

• 1)
$$x = s + c$$

$$t_1 = (int)s$$

$$t_2 = (int)c$$

$$t_3 = t_1 + t_2$$

$$x = (float)t_3$$

• 2)
$$i = s + c$$

$$t_1 = (int)s$$

$$t_2 = (int)c$$

$$i = t_1 + t_2$$

• 3)
$$x = (s+c)*(t+d)$$

$$t_1 = (int)s$$

$$t_2 = (int)c$$

$$t_3 = t_1 + t_2$$

$$t_4 = (int)t$$

$$t_5 = (int)d$$

$$t_6 = t_4 + t_5$$

$$t_7 = t_3 * t_6$$

$$x = (float)t_7$$