## 第十次作业参考答案

1. 为下列表达式构建 DAG 并指出每个子表达式的值编码

((x + y) - ((x + y) \* (x - y))) + ((x + y) \* (x - y))



子表达式的编码如下:

		ор	arg0	arg1
	1	id	x	
	2	id	y	
	3	+	1	2
	4	0	1	2
	5	W	3	4
d	6	-	3	5
	7	+	6	5

2. 四元式序列

2. 将语句 x = y \* (y + z) 翻译为

3. 三元式序列

1. 抽象语法树

- 4. 间接三元式序列
- 1.
- 青UCAS编译原

L	x	*	\		
		/	+		
		У	/ \		
			/	\	
		У	78	Z	
	ор	arg1	arg2	result	1
0	<b>op</b> +	arg1	arg2	result	1

0	+	у	z
1	*	у	(0)
2	=	х	(1)
4.			
	inst	ruction	

arg1

arg2

op

(0)

	(4)			
	ор	arg1	arg2	
0	+	У	z	
1	*	У	(0)	
			(1)	

line

1

name

Х

env

offset

0

2	X	float	0	2	
2	У	float	8	2	
2	р	record()	8	1	
4	tag	int	0	4	
4	x	float	4	4	_
4	m	record()	0	3	
5	у	float	12	3	
6	q	record()	24	1	
. 考虑	龙书图6-2	22的翻译方案	,翻译赋	值语句 x	=
				S	
		x		=	

type

float

E.addr = t7 L.array = a L.type = array(aclength, atype)

L.addr = t5

E.addr = t4

L.array = b

L.type = btype

a.type = array(ablength,

array(aclength, atype))

E.addr = t10

L.array = a L.type = atype L.addr = t9

c.type =

a[b[i][j]][c[k]]; , 并给出注释语法分析树。

Larray = c

L.type = ctype L.addr = t6

E.addr = k

k

		1	L.addr =		array(cklength, ctype)	
4	L.array = b L.type = array(bjle L.addr = t1	ongth, btype	) [	E.addr = j	1	
	b.type = [ array(bilength, array(bjlength, btype))	E.addr	r = i I i	1		
	t1 = i * bi_width					
	t2 = j * bj_width					
	t3 = t1 + t2					
	t4 = b[t3]					
	t5 = t4 * ab_width					
	t6 = k * ck_width				. 4	7
	t7 = c[t6]				1	>:-
	t8 = t7 * ac_width				107	-

t9 = t5 + t8t10 = a[t9]

x = t10