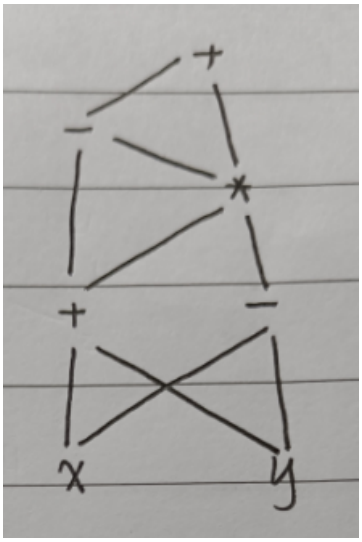
Assignment 7

6.1.1

练习**6.1.1**：为下面的表达式构造DAG

（（x+y）-（（x+y）*（x-y））+（（x+y）*（x-y））

答:



6.2.1

练习**6.2.1**：将算术表达式a+-（b+c）翻译成

1）抽象语法树

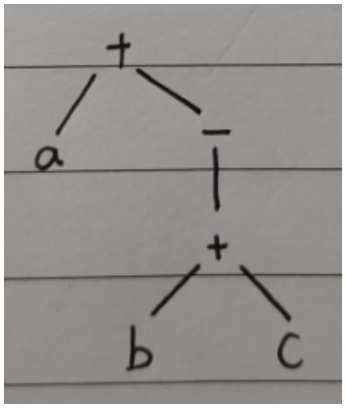
2）四元式序列

3）三元式序列

4）间接三元式序列

答:

(1)



(2)

	op	arg1	arg2	result
0	+	b	c	t1
1	-	t1		t2
2	+	a	t2	t3

(3)

	op	arg1	arg2
0	+	b	c
1	-	(0)	
2	+	a	(1)

(4)

	op	arg1	arg2
0	+	b	c
1	-	(0)	
2	+	a	(1)

	instruction
0	(0)
1	(1)
2	(2)

6.2.2

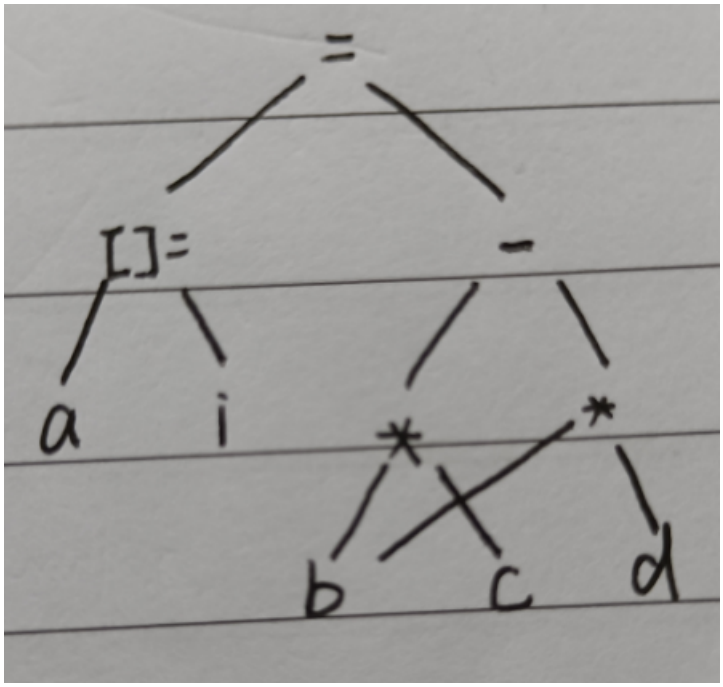
练习**6.2.2**：对下列赋值语句重复练习6.2.1。

(2)

2) `a[i] = b*c - b*d`

答:

抽象语法树



四元式序列

	op	arg1	arg2	result
0	*	b	c	t1
1	*	b	d	t2
2	-	t1	t2	t3
3	[]=	a	i	t4
4	=	t3		t4

三元式序列

	op	arg1	arg2
0	*	b	c
1	*	b	d
2	-	(0)	(1)
3	[]=	a	i
4	=	(3)	(2)

间接三元式序列

	op	arg1	arg2
0	*	b	c
1	*	b	d
2	-	(0)	(1)
3	[]=	a	i
4	=	(3)	(2)

	instruction
0	(0)
1	(1)
2	(2)
3	(3)
4	(4)

6.3.1

练习**6.3.1**：确定下列声明序列中各个标识符的类型和相对地址。

```
float x;
record { float x; float y; } p;
record { int tag; float x; float y; } q;
```

答:

line	标识符	类型	相对地址	Evn
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