CD Assignment-2

N.V.S.K. kalyan
17UNIA0584
3rd B.Tech CSE-C

1. $f = a * (b+c) - d/e$

A. Three address code

$t_1 = b+c$

$t_2 = a * t_1$

$t_3 = d/e$

$t_4 = t_2 - t_3$

$f = t_4$

2. $x = (a+b) * (c-d) + (e/f)$

A. Three address code

$0 : t_1 = a+b$

$1 : t_2 = c-d$

$2 : t_3 = e/f$

$3 : t_4 = t_1 * t_2$

$4 : t_5 = t_4 + t_3$

$5 : x = t_5$

quadruple representation

Ref no	opr	arg1	arg2	result
0	+	a	b	t_1
1	-	c	d	t_2
2	/	e	f	t_3
3	*	t_1	t_2	t_4
4	+	t_4	t_3	t_5
5	=	t_5		x

3. $a = b/c + e * f + t$

A. Three address code

$0 : t_1 = b/c$

$1 : t_2 = e * f$

$2 : t_3 = t_1 + t_2$

$3 : t_4 = t_3 + t_2$

$4 : a = t_4$

Triple representation

Ref no	opr	arg1	arg2
0	/	b	c
1	*	e	+
2	+	0	1
3	+	2	2
4	-	a	4

4. a : b * minus c + b * minus c

A- Three address code

0 : t_1 = unminus c
1 : t_2 = b * t_1
2 : t_3 = unminus c
3 : t_4 = b * t_3
4 : t_5 = t_2 + t_4
5 : a = t_5

reference pointer table

ref no	opr	arg1	arg2	points
0	unminus	c	a	(11)
1	*	(11)	b	(12)
2	unminus	c	.	(13)
3	*	(13)	b	(14)
4	+	(12)	(14)	(15)
5	=	x	(15)	(16)

5. $b = multiply(b_4, b_2, b_3)$

A. it is a function can its three address code

```
param b1;
param b2;
param b3;
b = call multiply, 3;
```