

Taller

③ Convertir a instrucciones de bajo nivel:

int $x = 0;$ ADD $\%lo, 0, \%lo$

int $y = 8;$ ADD $\%lo, 8, \%l1$

int $z = 1;$ ADD $\%lo, 1, \%l2$

$y = x + 3;$ ADD $\%lo, 3, \%l1$

$z = z + 3;$ ADD $\%l2, 3, \%l2$

$x = (x - z) + (3 + y)$ SUB $\%lo, \%l2, \%lo$

ADD $3, \%l1, \%l1$

ADD $\%lo, \%l1, \%lo$

④ Usar el ld y st:

$a[4] = a[2] + x;$ LD $[\%l1 + (2 \times 4)], \%lo$

$y[0] = y[40] + 13;$ ADD $\%lo, \%l2, \%l2$
ST $\%l2, [\%l3 + (4 \times 4)]$

LD $[\%l4 + (40 \times 4)], \%lo$

ADD $\%lo, 13, \%lo$

ST $\%lo, [\%l5 + (0 \times 4)]$

5) Convertir a lenguaje de máquina:

② int main() {

int $i \rightarrow \%Lo = 3;$ ADD $\%90, 3, \%Lo$

int $p \rightarrow \%L1 = 2;$ ADD $\%90, 2, \%L1$

return $i + 3;$ ADD $\%Lo, 3, \%00$

}

OP	RD	OP3	RS1	i	unused	RS2
10	10000	000000	000000	1	00000000000011	
31	29	24	18	13	12	4 0

OP	RD	OP3	RS1	i	unused	RS2
10	10001	000000	000000	1	00000000000010	
31	29	24	18	13	12	4 0

OP	RD	OP3	RS1	i	UNUSED	RS2
10	01000	000000	10000	1	00000000000011	
31	29	24	18	13	12	4 0

⑥ int main() {

int $p \rightarrow \%L_0$ = 3;

ADD %go, 3, %Lo

int $x \rightarrow \%L_1$ = 1;

ADD %go, 1, %L1

int $z \rightarrow \%L_2$ = 4;

ADD %go, 4, %L2

int $w = 0;$

$w = (p + 40) + (x - z);$ ADD %Lo, 40, %Lo

return 0;

SUB %L1, %L2, %L1

ADD %Lo, %L1, %Oo

OP	RD	OP3	RS1	i	unused	RS2
10	10000	00000	00000	1	00000000	00011
31 29 24 18 13	12	4	0			

OP	RD	OP3	RS1	i	UNUSED	RS2
10	10001	000000	00000	1	00000000	000001
31 29 24 18 13	12	4	0			

OP	RD	OP3	RS1	i	UNUSED	RS2
10	10010	000000	00000	1	00000000	00100
31 29 24 18 13	12	4	0			

OP	RD	OP3	RS1	i	UNUSED	RS2
10	10000	000000	10000	1	00000001	01000
31 29 24 18 13	12	4	0			

OP	RD	OP3	RS1	i	UNUSED	RS2
10	10001	000100	10001	0	00000000	10010
31 29 24 18 13	12	4	0			

OP	RD	OP3	RS1	i	RS2
10	01000	000000	10000	0	00000000 10001
31 29 24 18 13	12	4	0		

⑥ Inicializar las siguientes variables negativas usando OR:

OR:

→ % LO

$r = -12,$

OR % GO, -12, % LO

→ % L1

$d = -11,$

OR % GO, -11, % L1

→ % L2

$b = -14,$

OR % GO, -14, % L2