

Taller

③ Convertir a instrucciones de bajo nivel:

int $x = 0;$ $\rightarrow \%L0$ ADD $\%r0, 0, \%L0$

int $y = 8;$ $\rightarrow \%L1$ ADD $\%r0, 8, \%L1$

int $z = 1;$ $\rightarrow \%L2$ ADD $\%r0, 1, \%L2$

$y = x + 3;$ ADD $\%L0, 3, \%L1$

$z = z + 3;$ ADD $\%L2, 3, \%L2$

$x = (x - z) + (3 + y)$ SUB $\%L0, \%L2, \%L0$

ADD $3, \%L1, \%L1$

ADD $\%L0, \%L1, \%L0$

④ Usar el ld y st:

$a[4] = a[2] + x;$ $\rightarrow \%L3$ $\rightarrow \%L1$ $\rightarrow \%L2$

$y[0] = y[40] + 13;$ $\rightarrow \%L5$ $\rightarrow \%L4$

LD $[\%L1 + (2 \times 4)], \%L0$

ADD $\%L0, \%L2, \%L2$

ST $\%L2, [\%L3 + (4 \times 4)]$

LD $[\%L4 + (40 \times 4)], \%L0$

ADD $\%L0, 13, \%L0$

ST $\%L0, [\%L5 + (0 \times 4)]$

5) Convertir a lenguaje de máquina:

```
int main() {
```

```
    int i = 3;
```

```
    int p = 2;
```

```
    return i + 3;
```

```
}
```

```
ADD %g0, 3, %L0
```

```
ADD %g0, 2, %L1
```

```
ADD %L0, 3, %O0
```

OP	RD	OP3	RS1	i	unused	RS2
10	10000	000000	000000	1	000000000000	11
31	29	24	18	13	12	4 0

OP	RD	OP3	RS1	i	unused	RS2
10	10001	000000	000000	1	000000000000	10
31	29	24	18	13	12	4 0

OP	RD	OP3	RS1	i	UNUSED	RS2
10	01000	000000	100000	1	000000000000	11
31	29	24	18	13	12	4 0

⑥ int main() {
 int p = 3;
 int x = 1;
 int z = 4;
 int w = 0;

w = (p + 40) + (x - z);
 return 0;

ADD %g0, 3, %L0

ADD %g0, 1, %L1

ADD %g0, 4, %L2

ADD %L0, 40, %L0

SUB %L1, %L2, %L1

ADD %L0, %L1, %O0

OP	RD	OP3	RS1	i	unused	RS2
10	10000	00000	00000	1	00000000	000011
31	29	24	18	13	12	4 0

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

OP	RD	OP3	RS1	i	unused	RS2
10	10010	00000	00000	1	00000000	001000
31	29	24	18	13	12	4 0

OP	RD	OP3	RS1	i	unused	RS2
10	10000	00000	10000	1	00000001	010000
31	29	24	18	13	12	4 0

OP	RD	OP3	RS1	i	unused	RS2
10	10001	000100	10001	0	00000000	100100
31	29	24	18	13	12	4 0

OP	RD	OP3	RS1	i	unused	RS2
10	01000	00000	10000	0	00000000	100001
31	29	24	18	13	12	4 0

⑥ Inicializar las siguientes variables negativas usando
OR:

$n = -12,$

OR $\%90, -12, \%L0$

$d = -11,$

OR $\%90, -11, \%L1$

$b = -14,$

OR $\%90, -14, \%L2$