

# MIPStoC

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## 1 MIPS to C

```
# a, b, c, d, e -> $s0, $s1, $s2, $s3, $s4
# X -> $s6, Y -> $s7
```

```
sll $t0, $s0, 2
add $t0, $s6, $t0
```

```
sll $t1, $s1, 2
add $t1, $s7, $t1
```

```
lw $s0, 0($t0)
```

```
addi $t2, $t0, 4
```

```
lw $t0, 0($t2)
```

```
add $t0, $t0, $s0
```

```
sw $t0, 0($t1)
```

```
int, a, b, c, d, e;
int[] X, Y;
```

```
int* x = &X;
int* y = &Y;
```

```
int four_a = a * 4;
four_a = x + four_a;
```

```
int four_b = b * 4;
four_b = y + four_b;
```

```
a = X[four_a];
plus_four = a + 4;
```

```
a = X[plus_four];
a = a + x;
```

```
Y[four_b] = a;
```