

High-level Language

```
temp  = v[k];  
v[k]  = v[k+1];  
v[k+1] = temp;
```

```
TEMP = V(K)  
V(K) = V(K+1)  
V(K+1) = TEMP
```

C/Java Compiler



Fortran Compiler

Assembly Language

```
lw  $t0, 0($2)  
lw  $t1, 4($2)  
sw  $t1, 0($2)  
sw  $t0, 4($2)
```



MIPS Assembler

Machine Language

```
0000 1001 1100 0110 1010 1111 0101 1000  
1010 1111 0101 1000 0000 1001 1100 0110  
1100 0110 1010 1111 0101 1000 0000 1001  
0101 1000 0000 1001 1100 0110 1010 1111
```