

*C code for thread i*

```
for (i = 0; i < niters; i++)  
    cnt++;
```



*Asm code for thread i*

```
movq  (%rdi), %rcx  
testq %rcx,%rcx  
jle   .L2  
movl  $0, %eax
```

$H_i$ : Head

.L3:

```
movq  cnt(%rip), %rdx  
addq  $1, %rdx  
movq  %rdx, cnt(%rip)
```

$L_i$ : Load cnt

$U_i$ : Update cnt

$S_i$ : Store cnt

```
addq  $1, %rax
```

```
cmpq  %rcx, %rax
```

```
jne   .L3
```

$T_i$ : Tail

.L2: