

recFib:

```
    addi    $sp, $sp, -12      # save $ra, $s0, and $s1
    sw      $ra, 0($sp)
    sw      $s0, 4($sp)
    sw      $s1, 8($sp)
    li      $t0, 1
    bgt     $a0, $t0, Recurse  # if (n > 1) recurse
    move    $v0, $a0           # return n
    j       Done
```

Recurse:

```
    addi    $s0, $a0, -1      # $s0 <-- n-1
    addi    $a0, $a0, -2      # $10 <-- n-2
    jal     recFib             #
    move     $s1, $v0          # $s1 <-- Fib(n-2)
    move     $a0, $s0          # $a0 <-- n-1
    jal     recFib             #
    add      $v0, $v0, $s1     # $v0 <-- Fib(n-1) + Fib(n-2)
```

Done:

```
    lw      $ra, 0($sp)       # restore $ra, $s0, and $s1
    lw      $s0, 4($sp)
    lw      $s1, 8($sp)
    addi    $sp, $sp, 12
    jr      $ra
```