```
*assign $t1 = 1
 *assign $t2 = 1
 addiu - mem(0) = 1 (\$zero + 1)
 andi
                  - mem(1) = 1 ($zero && 1)
 ori
                    - mem(2) = 1 ( | zero | | 1 )
 xori
                   - mem(3) = 0  ($zero xor 1)
 slti
                   - mem(4) = 0 ($t1 < 0)
 sltiu - \text{mem}(5) = 1 \quad (\$\text{zero} < 1)
 addu - \text{mem}(6) = 2 (\$t1 + \$t1)
 subu - mem(7) = -1 ($t1 - 2)
 and
                   - mem(8) = 1 ($t1 || $t1)
                    - mem(9) = 1 ($t1 || $t1)
 or
 xor
                    - mem(10) = 0 (\$zero xor \$zero)
 nor
                    - mem(11) = 1 (\$zero nor \$zero)
 slt
                    - mem(12) = 0 ($t1 < $t1)
 sltu
                    - mem(13) = 1 (\$zero < \$t1)
 sll
                    - mem(14) = 2 ($t1 <<< 1)
 srl
                    - mem(15) = 0 ($t1 >>> 1)
 sra
                    - mem(16) = 0 ($t1 >> 1)
 SW
                    - mem(0) = 1  (sw in mem(0x00))
                    - \text{reg}(\$t3) = 1 \text{ (lw from mem}(0x00))
 lw
                    - \text{ reg}(\$t5) = 1
 beg
           • ในโค้ดจะทำการ beg $zero,$zero
           • โดดไปยังตำแหน่ง branch
           • $t5 = $zero + 1
 bne - reg(\$t6) = 2
           • $t6 = 0
           • ในโค้ดจะทำการ bne $zero,$zero ซึ่งจะไม่ branch
           • $t6 = $t6 + 1
           • $t6 = $t6 + 1
j
                    - \text{ reg}(\$t7) = 1
           • $t7 = 0

    Jump แล้ว $t7 = $t7 + 1

ir, ightharpoonup ir,
           • jal ไปยัง address ปลายทาง
           • $t8 = $zero + 1
           • jr ย้อนกลับไปยังตำแหน่งก่อน jal
           • $t9 = $zero + 2
```