

### Problem 6.1:

```
1. 1 10001100000000001000100000000000 # lw r1, 0x1000 (r0)
2 000000000010000000001000000100000 # add r2, r0, r1
3 loop: 00100000000000110000000000000001 # addi r3, r3, 1
4 00010000010000000000000000000001100 # beqz r2, end
5 00000000010000110001100000011001 # multu r2, r1, r3
6 0010100001000010000000000000000001 # subi r2, r2, 1
7 0000101111111111111111111110000 # j loop
8 end: 10101100000000110001000000000100 # sw r3, 0x1004 (r0)
```

### Problem 6.2:

```
1. 1 lw r1 , 0 x1000 (r0) # 100011000000000010001000000000000 ; 0x8c011000
2 lw r2 , 0 x1004 (r0) # 1000110000000001000010000000000100 ; 0x8c021004
3 loop : beqz r1 , end # 0001000000100000000000000000010010 ; 0x10200012
4 slt r3, r1, r2 # 00000000001000100001100000101010 ; 0x0022182a
5 bnez r3 , branch # 000100000110000000000000000001110 ; 0x1060000d
6 sub r3 , r1 , r2 # 00000000001000100001100000100010 ; 0x00221822
7 add r1 , r2 , r0 # 00000000010000000000100000100000 ; 0x00400820
8 add r2 , r3 , r0 # 000000000110000000001000000100000 ; 0x00601020
9 j loop # 0000101111111111111111111110000 ; 0x0bffff0
10 branch: sub r3, r2, r1 # 00000000010000010001100000100010 ; 0x00411802
11 add r2, r1, r0 # 000000000010000000001000000100000 ; 0x00201020
12 add r1, r3, r0 # 00000000011000000000100000100000 ; 0x00600820
13 j loop # 0000101111111111111111111110000 ; 0x0bffff0
14 end: sw 0x1008 (r0), r2# 101011000000001000010000000001000 ; 0xac021008
```