```
gcd:
      cmp  r0, r1      # compare r0 and r1
      beq  end         # branch if r0 == r1
      blt  less        # branch if r0 < r1
      sub  r0, r0, r1  # r0 = r0 - r1
      b    gcd         # branch to label gcd
less:
      sub  r1, r1, r0  # r1 = r1 - r0
      b    gcd         # branch to label gcd
end:
      add  r1, r1, r0  # r1 = r1 + r0
      mov  r3, r1      # r3 = r1
```

GCD with conditional branches

```
add  r0, r1, r2      # r0 = r1 + r2
sub  r1, r0, r1      # r1 = r0 - r1
ldr  r2, [r1]        # r2 = mem[r1]
sub  r0, r2, r1      # r0 = r2 - r1
cmp  r0, r3          # compare r0 and r3
```

Sample code with data dependency