# 1. Secvenţe de verificare comune

## Toate proiectele vor executa secvenţa de verificare A (all):

```
LOOP:
    mov     0x1020, w1  ;INW0=aaab
    mov     0x1022, w2  ;INW1=5555
    add     w1,w2,w3
    sub     w1,w2,w4
    and     w1,w2,w5
    ior     w1,w2,w6
    mov     w1,0x1024
    mov     w2,0x1024
    mov     w3,0x1024
    mov     w4,0x1024
    mov     w5,0x1024
    mov     w6,0x1024
    bra     LOOP
```

## Secvenţa de verificare pentru flag-ul Z (zero):

```
;flag Z
LOOP:
    mov     0x1020, w1  ;INW0=ffff
    mov     0x1022, w2  ;INW1=0001
    add     w1,w2,w3    ;0000, Z=1
    add     w2,w2,w7    ;0002, Z=0
    sub     w2,w2,w4    ;0000, Z=1
    sub     w4,w2,w4    ;ffff, Z=0
    and     w1,w3,w5    ;0000, Z=1
    and     w1,w1,w5    ;ffff  Z=0
    ior     w3,w3,w6    ;0000  Z=1
    ior     w1,w2,w6    ;FFFF  Z=0
    mov     w1, 0x1024
    mov     w2, 0x1024
    mov     w3, 0x1024
    mov     w4, 0x1024
    mov     w5, 0x1024
    mov     w6, 0x1024
    bra     LOOP
```

## Secvenţa de verificare pentru flag-ul N (Negative):

```
LOOP:
    mov     0x1020, w1  ;INW0=7fff
    mov     0x1022, w2  ;INW1=0001
    add     w1,w2,w3    ;8000, N=1
    add     w3,w3,w3    ;0000, N=0
    sub     w3,w2,w4    ;ffff, N=1
    sub     w4,w4,w3    ;0000, N=0
    and     w4,w4,w5    ;ffff, N=1
    and     w4,w2,w5    ;0001, N=0
    ior     w4,w1,w6    ;ffff, N=1
    ior     w1,w1,w6    ;7fff, N=0
    mov     w1, 0x1024
    mov     w2, 0x1024
    mov     w3, 0x1024
    mov     w4, 0x1024
    mov     w5, 0x1024
    mov     w6, 0x1024
    bra     LOOP
```

### Secvenţa de verificare pentru flag-ul C (carry):

```
LOOP:
    mov     0x1020, w1  ;INW0=ffff
    mov     0x1022, w2  ;INW1=0001
    add     w1,w2,w3    ;0000, C=1
    and     w1,w2,w5    ;C nemodificat
    add     w3,w2,w3    ;0001, C=0
    sub     w3,w2,w4    ;0000, C=1
    ior     w1,w2,w6    ;C nemodificat
    sub     w4,w2,w4    ;ffff, C=0
    mov     w1, 0x1024
    mov     w2, 0x1024
    mov     w3, 0x1024
    mov     w4, 0x1024
    mov     w5, 0x1024
    mov     w6, 0x1024
    bra     LOOP
```

### Secvenţa de verificare pentru flag-ul OV (overflow):

```
LOOP:
    mov     0x1020, w1  ;INW0=7fff
    mov     0x1022, w2  ;INW1=0001
    add     w1,w2,w3    ;w3=8000, OV=1
    add     w2,w2,w8    ;w8=2   , OV=0
    add     w3,w3,w4    ;w4=0000, OV=1
    add     w3,w2,w8    ;         OV=0
    sub     w2,w3,w5    ;w5=8001, OV=1
    sub     w1,w2,w8    ;         OV=0
    sub     w5,w1,w7    ;w6=0002, OV=1
    and     w1,w2,w5    ;OV nemodificat
    ior     w1,w2,w6    ;OV nemodificat
    mov     w1, 0x1024
    mov     w2, 0x1024
    mov     w3, 0x1024
    mov     w4, 0x1024
    mov     w5, 0x1024
    bra     LOOP
```