

C Code

```
y = x - 2
if (x > 1) {
    a[i] = y
    i++
} else {
    a[i] = x
}
```

Code Generation

```
L0:
    subi t1, x, 2
    sd y, t1
    tgti p1, x, 1
    br_t<p1> L1
    br_f<p2> L2
L1:
    ld t2, a + i
    sd t2, t1
    addi i, i, 1
    br L3
L2:
    ld t2, a + i
    sd t2, x
    br L3
L3:
```

Block Formation

```
read x, g70
read i, g71
subi t1, x, 2
sd y, t1
tgti p1, x, 1
br_t<p1> L1
br_t<p2> L2
```

```
read i, g71
ld t1, y
ld t2, a + 1
sd t2, t1
addi i, i, 1
write g71, i
```

```
read x, g70
ld t2, a+i
sd t2, x
```

