```
sum1ton.o:      file format elf64-littleriscv


Disassembly of section .text:

00000000000100b0 <main>:
    100b0:      00001637            lui     a2,0x1
    100b4:      00021537            lui     a0,0x21
    100b8:      ff010113            addi    sp,sp,-16
    100bc:      3ba60613            addi    a2,a2,954 # 13ba <main-0xecf6>
    100c0:      06400593            li      a1,100
    100c4:      18050513            addi    a0,a0,384 # 21180 <__clzdi2+0x44>
    100c8:      00113423            sd      ra,8(sp)
    100cc:      340000ef            jal     ra,1040c <printf>
    100d0:      00813083            ld      ra,8(sp)
    100d4:      00000513            li      a0,0
    100d8:      01010113            addi    sp,sp,16
    100dc:      00008067            ret

00000000000100e0 <register_fini>:
    100e0:      ffff0797            auipc   a5,0xffff0
    100e4:      f2078793            addi    a5,a5,-224 # 0 <main-0x100b0>
    100e8:      00078863            beqz    a5,100f8 <register_fini+0x18>
    100ec:      00000517            auipc   a0,0x0
    100f0:      11050513            addi    a0,a0,272 # 101fc <__libc_fini_array>
    100f4:      0c00006f            j       101b4 <atexit>
    100f8:      00008067            ret
```

```
sum1ton.o:     file format elf64-littleriscv


Disassembly of section .text:

00000000000100b0 <main>:
    100b0:      00001637        lui     a2,0x1
    100b4:      00021537        lui     a0,0x21
    100b8:      ff010113        addi    sp,sp,-16
    100bc:      3ba60613        addi    a2,a2,954 # 13ba <main-0xecf6>
    100c0:      06400593        li      a1,100
    100c4:      18050513        addi    a0,a0,384 # 21180 <__clzdi2+0x44>
    100c8:      00113423        sd      ra,8(sp)
    100cc:      340000ef        jal     ra,1040c <printf>
    100d0:      00813083        ld      ra,8(sp)
    100d4:      00000513        li      a0,0
    100d8:      01010113        addi    sp,sp,16
    100dc:      00008067        ret

00000000000100e0 <register_fini>:
    100e0:      ffff0797        auipc   a5,0xffff0
    100e4:      f2078793        addi    a5,a5,-224 # 0 <main-0x100b0>
    100e8:      00078863        beqz    a5,100f8 <register_fini+0x18>
    100ec:      00000517        auipc   a0,0x0
    100f0:      11050513        addi    a0,a0,272 # 101fc <__libc_fini_array>
    100f4:      0c00006f        j       101b4 <atexit>
    100f8:      00008067        ret
```

```
vsduser@vsduser-VirtualBox:~$ spike pk sum1ton.o
bbl loader
Sum of numbers from 1 to 100 is 5050vsduser@vsduser-VirtualBox:~$ spike -d pk sum1ton.o
(spike) until pc 0 100b0
bbl loader
(spike) reg 0 a2
0x0000000000000000
(spike)
core   0: 0x00000000000100b0 (0x00001637) lui     a2, 0x1
(spike) reg 0 a2
0x0000000000001000
(spike)
core   0: 0x00000000000100b4 (0x00021537) lui     a0, 0x21
(spike) reg 0 a0
0x0000000000021000
(spike)
core   0: 0x00000000000100b8 (0xff010113) addi    sp, sp, -16
(spike) reg 0 sp
0x0000003ffffffb40
(spike) q
vsduser@vsduser-VirtualBox:~$ spike -d pk sum1ton.o
(spike) until pc 0 100b8
bbl loader
(spike) reg 0 sp
0x0000003ffffffb50
(spike)
core   0: 0x00000000000100b8 (0xff010113) addi    sp, sp, -16
(spike) reg 0 sp
0x0000003ffffffb40
(spike)
```

```
vsduser@vsduser-VirtualBox:~$ riscv64-unknown-elf-gcc -Ofast -mabi=lp64 -march=rv64i -o sum1ton.o sum1ton.c
vsduser@vsduser-VirtualBox:~$ gcc sum1ton.c
Sum of numbers from 1 to 100 is 5050vsduser@vsduser-VirtualBox:~$ riscv64-unknown-elf-gcc -Ofast -mabi=lp64 -march=rv64i -o sum1ton.o sum1ton
.c
vsduser@vsduser-VirtualBox:~$ spike pk sum1ton.o
bbl loader
Sum of numbers from 1 to 100 is 5050vsduser@vsduser-VirtualBox:~$ spike -d pk sum1ton.o
(spike) until pc 0 100b0
bbl loader
(spike) reg 0 a2
0x0000000000000000
(spike)
core   0: 0x00000000000100b0 (0x00001637) lui      a2, 0x1
(spike) reg 0 a2
0x0000000000001000
(spike)
core   0: 0x00000000000100b4 (0x00021537) lui      a0, 0x21
(spike) reg 0 a0
0x0000000000021000
(spike)
core   0: 0x00000000000100b8 (0xff010113) addi     sp, sp, -16
(spike) reg 0 sp
0x0000003fffffb40
(spike) q
vsduser@vsduser-VirtualBox:~$ spike -d pk sum1ton.o
(spike) until pc 0 100b8
bbl loader
(spike) reg 0 sp
0x0000003fffffb50
(spike)
```