

vsdworkshop [Running] - Oracle VirtualBox

File Machine View Input Devices Help

Activities Terminal

Sat 15:22

vsduser@vsduser-VirtualBox: ~

```
File Edit View Search Terminal Help
vsduser@vsduser-VirtualBox:~$ cd
vsduser@vsduser-VirtualBox:~$ leafpad sumiton.c &
[1] 8916
vsduser@vsduser-VirtualBox:~$ Gtk-Message: 15:20:30.538: Failed to load module "gail"
Gtk-Message: 15:20:30.538: Failed to load module "atk-bridge"
Gtk-Message: 15:20:30.556: Failed to load module "canberra-gtk-module"

vsduser@vsduser-VirtualBox:~$ gcc sumiton.c
vsduser@vsduser-VirtualBox:~$ ./a.out
sum of numbers 1 to 5 is 15vsduser@vsduser-VirtualBox:~$
```

Air: Very Poor Now

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vsdworkshop [Running] - Oracle VirtualBox

File Machine View Input Devices Help

Activities Leafpad Sat 15:23 sum1ton.c

```
#include<stdio.h>
int main()
{
    int i,sum=0,n=5;
    for(i=1;i<= n;++i)
    {
        sum+=i;
    }
    printf("sum of numbers 1 to %d is %d",n,sum);
    return 0;
}
```

Air: Very Poor Now

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vswdworkshop [Running] - Oracle VirtualBox

FileMachineViewInputDevicesHelp

ActivitiesTerminal

Sat 15:55

vsduser@vsduser-VirtualBox: ~

vsduser@vsduser-VirtualBox: ~

000000000010184 <main>:

10184: ff010113 addi sp,sp,-16

10188: 00113423 sd ra,8(sp)

1018c: 00f00613 li a2,15

10190: 00500593 li a1,5

10194: 00021537 lui a0,0x21

10198: 18050513 addi a0,a0,384 # 21180 <__clzdi2+0x48>

1019c: 26c000ef jal ra,10408 <printf>

101a0: 00000513 li a0,0

101a4: 00813083 ld ra,8(sp)

101a8: 01010113 addi sp,sp,16

101ac: 00008067 ret

0000000000101b0 <atexit>:

101b0: 00050593 mv a1,a0

101b4: 00000693 li a3,0

101b8: 00000613 li a2,0

101bc: 00000513 li a0,0

101c0: 4390206f j 12df8 <__register_exitproc>

0000000000101c4 <exit>:

101c4: ff010113 addi sp,sp,-16

101c8: 00000593 li a1,0

101cc: 00813023 sd s0,0(sp)

101d0: 00113423 sd ra,8(sp)

101d4: 00050413 mv s0,a0

101d8: 4cd020ef jal ra,12ea4 <__call_exitprocs>

101dc: 74818793 addi a5,gp,1864 # 23150 <global_impure_ptr>

101e0: 0007b503 ld a0,0(a5)

101e4: 05853783 ld a5,88(a0)

101e8: 00078463 beqz a5,101f0 <exit+0x2c>

101ec: 000780e7 jalr a5

101f0: 00040513 mv a0,s0

101f4: 7410e0ef jal ra,1f134 <_exit>

0000000000101f8 <__libc_fini_array>:

101f8: fe010113 addi sp,sp,-32

101fc: 00813823 sd s0,16(sp)

10200: 00012797 auipc a5,0x12

10204: e2078793 addi a5,a5,-480 # 22020 <__fini_array_end>

10208: 00012417 auipc s0,0x12

1020c: e1040413 addi s0,s0,-496 # 22018 <__init_array_end>

10210: 408787b3 sub a5,a5,s0

10214: 00913423 sd s1,8(sp)

Calculator

Programmer

101AC + 4 =

1 01B0

HEX 1 01B0

DEC 65,968

OCT 200 660

BIN 0001 0000 0001 1011 0000

QWORD MS Mv

Bitwise Bit shift

A << >> CE <X>

B () % ÷

C 7 8 9 ×

D 4 5 6 −

E 1 2 3 +

F +/- 0 . =

79°F Haze

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vsworkshop [Running] - Oracle VirtualBox

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Sat 17:29

vsduser@vsduser-VirtualBox: ~

vsduser@vsduser-VirtualBox: ~

vsduser@vsduser-VirtualBox: ~

vsduser@vsduser-VirtualBox: ~

00000000000100b0 <main>:
100b0: 00021537 lui a0,0x21
100b4: ff010113 addi sp,sp,-16
100b8: 00f00613 li a2,15
100bc: 00500593 li a1,5
100c0: 18050513 addi a0,a0,384 # 21180 <_clzdi2+0x48>
100c4: 00113423 sd ra,8(sp)
100c8: 340000ef jal ra,10408 <printf>
100cc: 00813083 ld ra,8(sp)
100d0: 00000513 li a0,0
100d4: 01010113 addi sp,sp,16
100d8: 00008067 ret

00000000000100dc <register_fini>:
100dc: ffff0797 auipc a5,0xfffff0
100e0: f2478793 addi a5,a5,-220 # 0 <main-0x100b0>
100e4: 00078863 beqz a5,100f4 <register_fini+0x18>
100e8: 00000517 auipc a0,0x0
100ec: 11050513 addi a0,a0,272 # 101f8 <__libc_fini_array>
100f0: 0c00006f j 101b0 <atexit>
100f4: 00008067 ret

00000000000100f8 <_start>:
100f8: 00013197 auipc gp,0x13
100fc: 91018193 addi gp,gp,-1776 # 22a08 <__global_pointer\$>
10100: 77018513 addi a0,gp,1904 # 23178 <_edata>
10104: 00013617 auipc a2,0x13
10108: 10460613 addi a2,a2,260 # 23208 <__BSS_END__>
1010c: 40a60633 sub a2,a2,a0
10110: 00000593 li a1,0
10114: 1d4000ef jal ra,102e8 <memset>
10118: 00000517 auipc a0,0x0
1011c: 0e050513 addi a0,a0,224 # 101f8 <__libc_fini_array>
10120: 090000ef jal ra,101b0 <atexit>
10124: 130000ef jal ra,10254 <__libc_init_array>
10128: 00012503 lw a0,0(sp)
1012c: 00810593 addi a1,sp,8
10130: 00000613 li a2,0
10134: f7dff0ef jal ra,100b0 <main>
10138: 08c0006f j 101c4 <exit>

000000000001013c <_do_global_dtors_aux>:
1013c: 7981c783 lbu a5,1944(gp) # 231a0 <completed.5468>
10140: 04079463 bnez a5,10188 <__do_global_dtors_aux+0x4c>
:

Calculator

Programmer

2C ÷ 4 =
B

HEX B
DEC 11
OCT 13
BIN 1011

QWORD MS Mv

Bitwise Bit shift

A << >> CE <X>
B () % ÷
C 7 8 9 ×
D 4 5 6 −
E 1 2 3 +
F +/- 0 . =

86°F Sunny

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vsdworkshop [Running] - Oracle VirtualBox

File Machine View Input Devices Help

Activities Terminal

Sat 17:35

vsduser@vsduser-VirtualBox: ~

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vsduser@vsduser-VirtualBox: ~

vsduser@vsduser-VirtualBox: ~\$ cat sum1ton.c

```
#include<stdio.h>
int main()
{
    int i,sum=0,n=5;
    for(i=1;i<= n;++i)
    {
        sum+=i;
    }
    printf("sum of numbers 1 to %d is %d",n,sum);
    return 0;
}
```

vsduser@vsduser-VirtualBox:~\$ riscv64-unknown-elf-gcc -O1 -mabi=lp64 -march=rv64i -o sum1ton.o sum1ton.c

vsduser@vsduser-VirtualBox:~\$ ls -ltr sum1ton.o

```
-rwxrwxr-x 1 vsduser vsduser 167512 Jan  4 17:02 sum1ton.o
```

vsduser@vsduser-VirtualBox:~\$ riscv64-unknown-elf-gcc -Ofast -mabi=lp64 -march=rv64i -o sum1ton.o sum1ton.c

vsduser@vsduser-VirtualBox:~\$

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