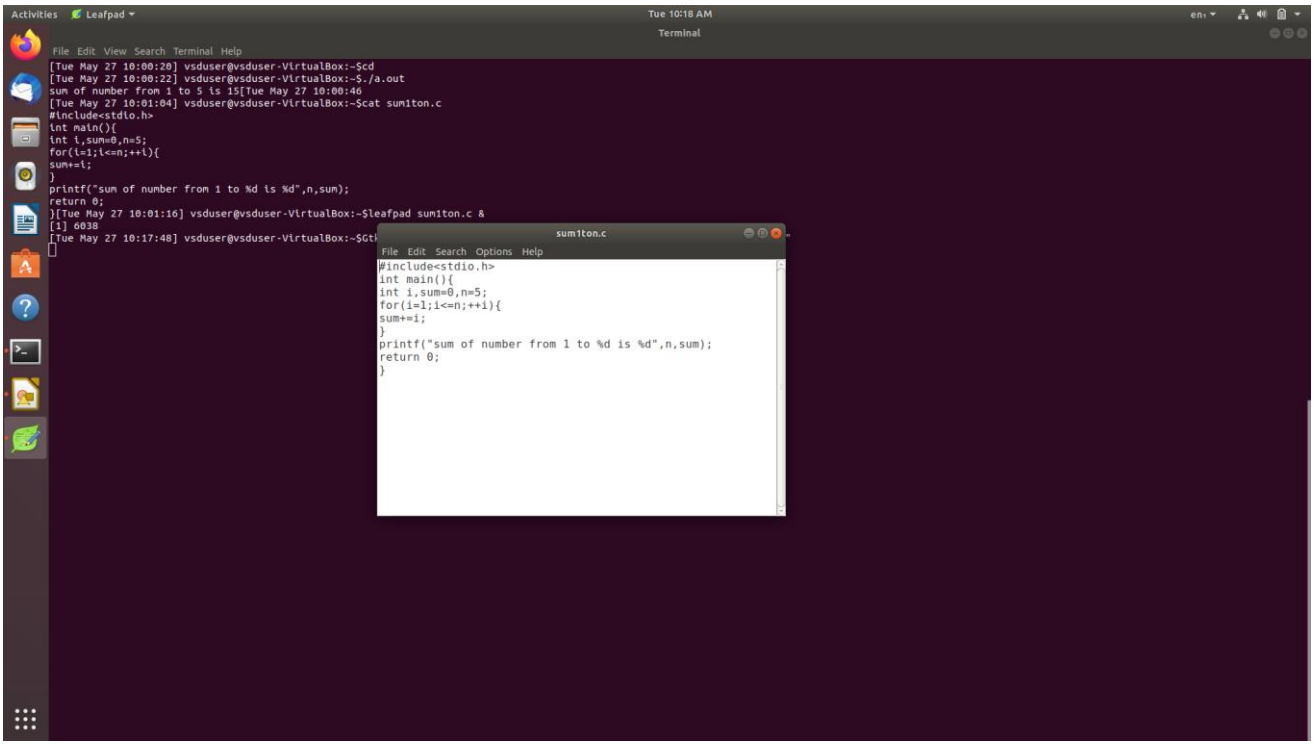
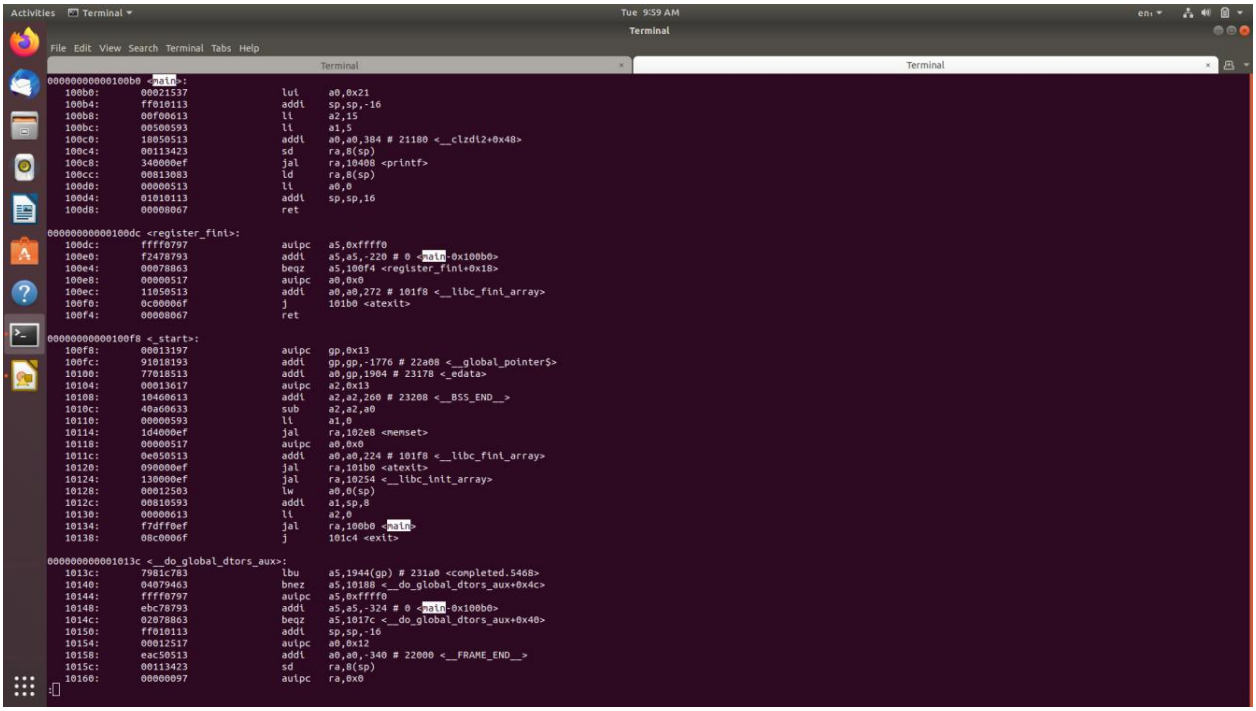
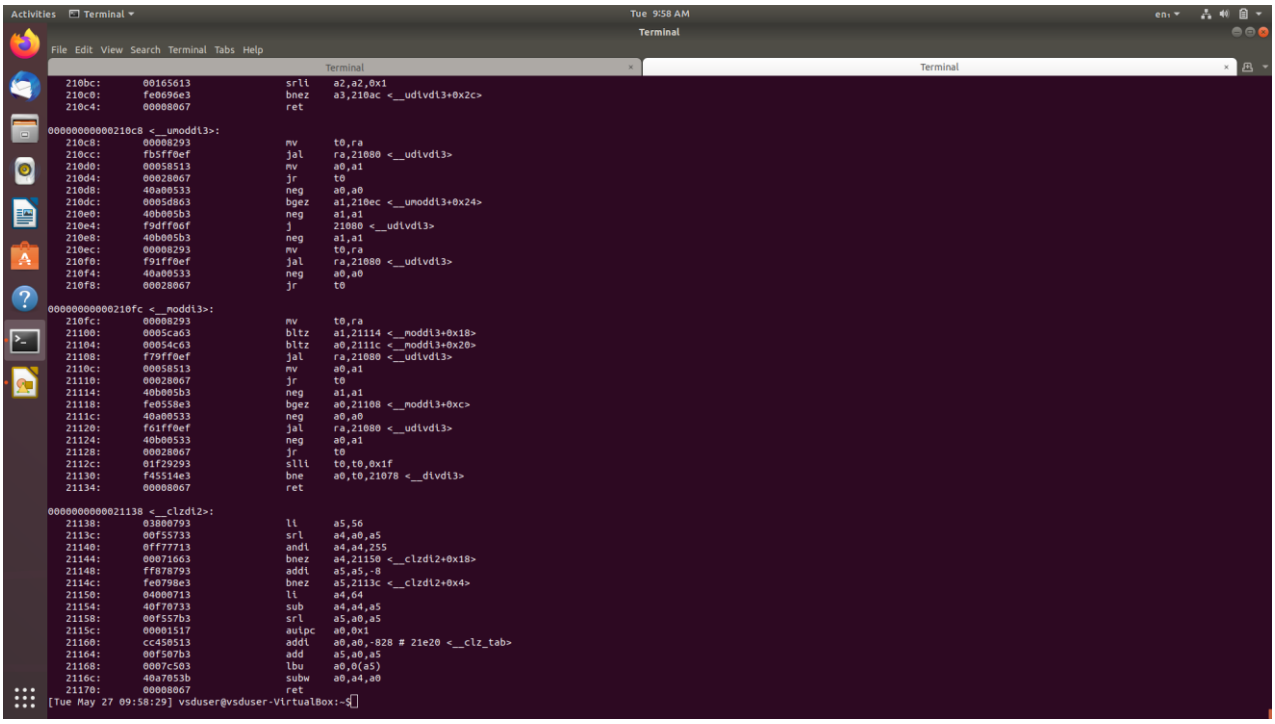
Task 2

1.C Code compiled on gcc Compiler

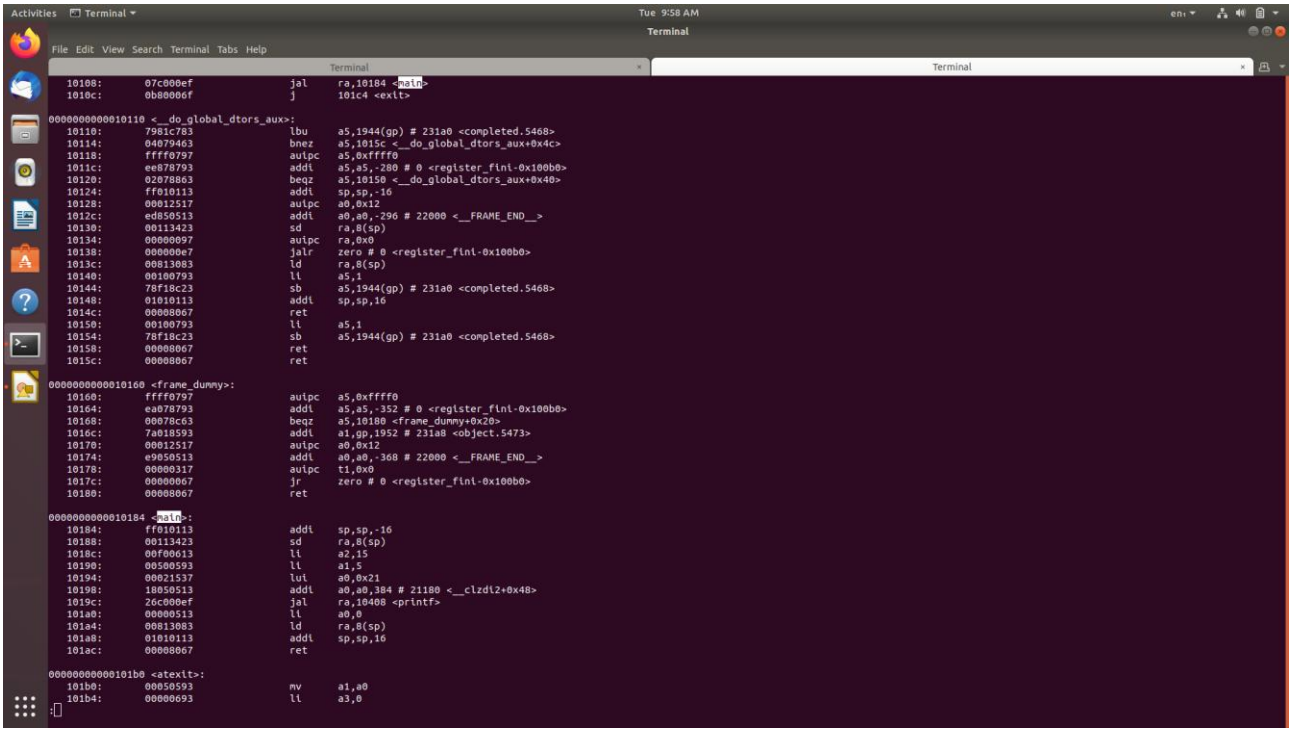


2.C Code compiled on riscv gcc Compiler



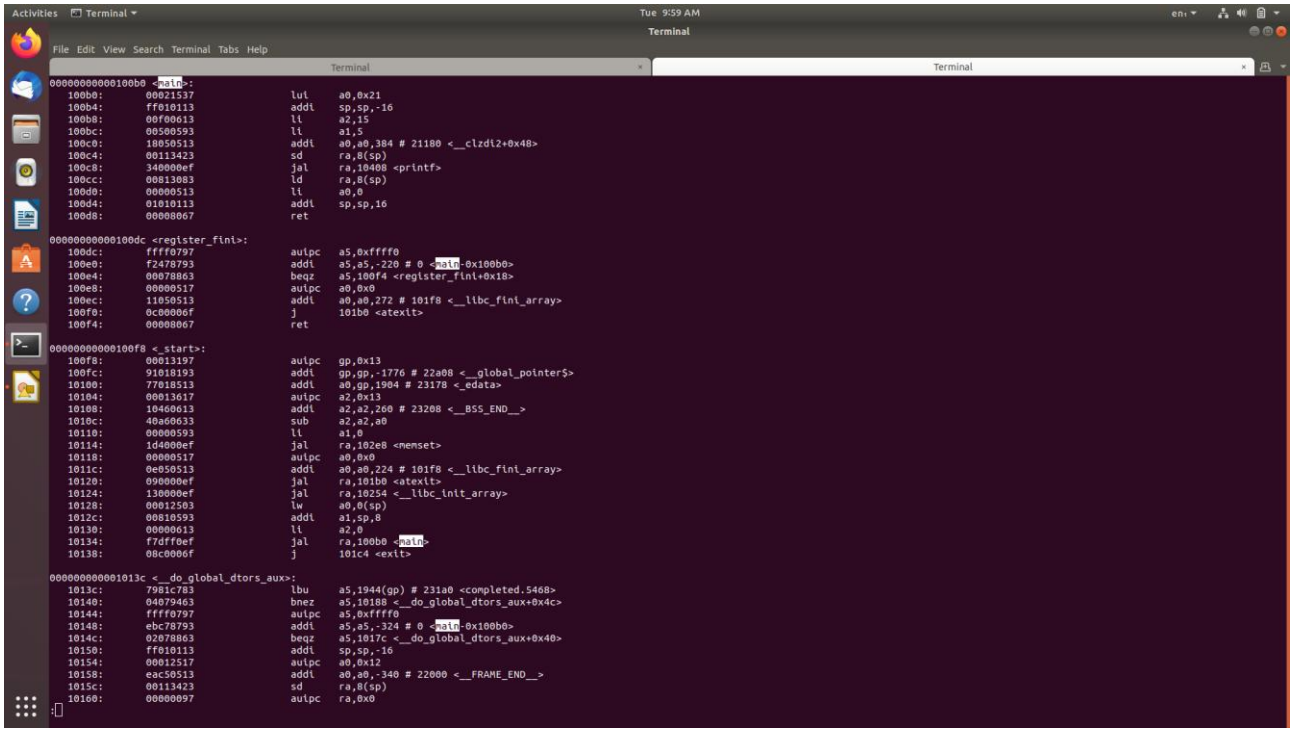


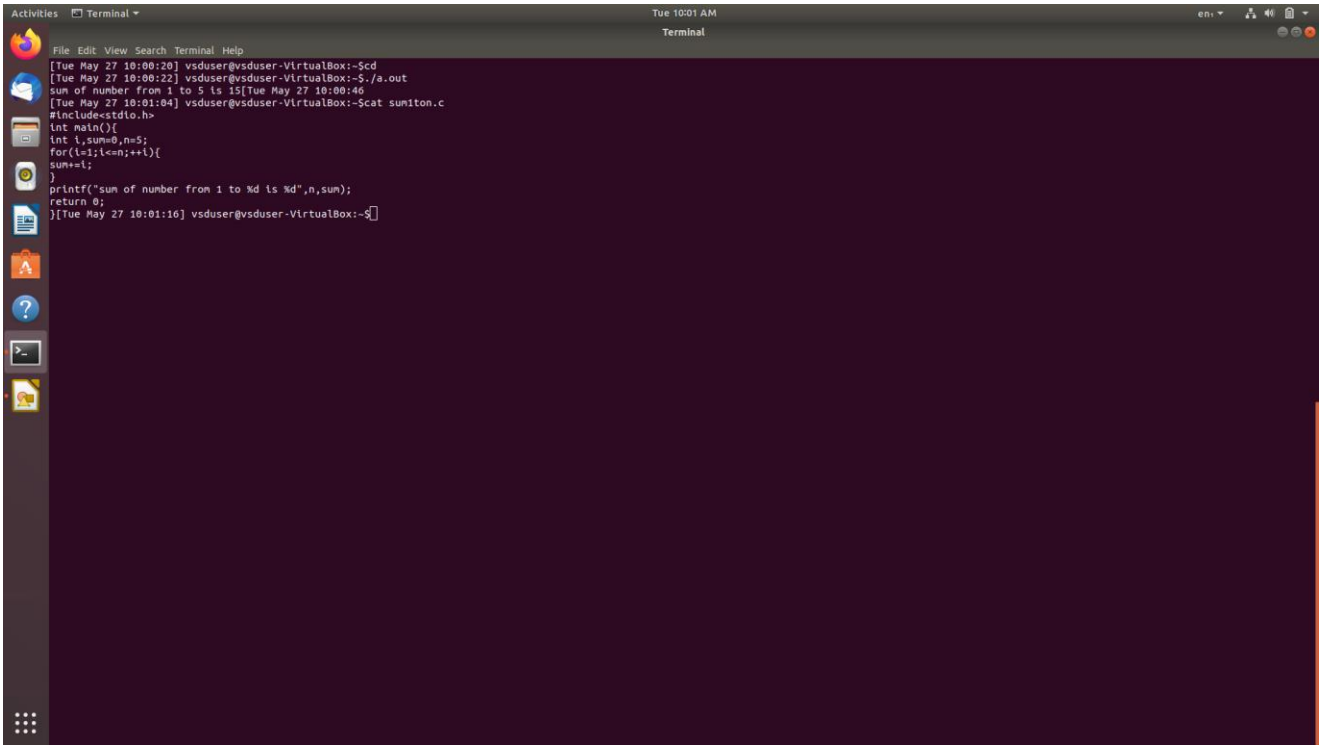
3.Objdump using -O1 format




```
   10108:       07c000ef                jal     ra,10184 <main>
   1010c:       0b80006f                j       101c4 <exit>

0000000000010110 <__do_global_dtors_aux>:
   10110:       7981c783                lbu     a5,1944(gp) # 231a0 <completed.5468>
   10114:       04079463                bnez    a5,1015c <__do_global_dtors_aux+0x4c>
   10118:       ffff0797                auipc   a5,0xffff0
   1011c:       ee878793                addi    a5,a5,-280 # 0 <register_fini-0x100b0>
   10120:       02078863                beqz    a5,10150 <__do_global_dtors_aux+0x40>
   10124:       ff010113                addi    sp,sp,-16
   10128:       00012517                auipc   a0,0x12
   1012c:       ed850513                addi    a0,a0,-296 # 22000 <__FRAME_END__>
   10130:       00113423                sd      ra,8(sp)
   10134:       00000097                auipc   ra,0x0
   10138:       000000e7                jalr    zero # 0 <register_fini-0x100b0>
   1013c:       00813083                ld      ra,8(sp)
   10140:       00100793                li      a5,1
   10144:       78f18c23                sb      a5,1944(gp) # 231a0 <completed.5468>
   10148:       01010113                addi    sp,sp,16
   1014c:       00008067                ret
   10150:       00100793                li      a5,1
   10154:       78f18c23                sb      a5,1944(gp) # 231a0 <completed.5468>
   10158:       00008067                ret
   1015c:       00008067                ret

0000000000010160 <frame_dummy>:
   10160:       ffff0797                auipc   a5,0xffff0
   10164:       ea878793                addi    a5,a5,-352 # 0 <register_fini-0x100b0>
   10168:       00078c63                beqz    a5,10180 <frame_dummy+0x20>
   1016c:       7a018593                addi    a1,gp,1952 # 231a8 <object.5473>
   10170:       00012517                auipc   a0,0x12
   10174:       e9050513                addi    a0,a0,-368 # 22000 <__FRAME_END__>
   10178:       00000317                auipc   t1,0x0
   1017c:       00000067                jr      zero # 0 <register_fini-0x100b0>
   10180:       00008067                ret

0000000000010184 <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

00000000000101b0 <atexit>:
   101b0:       00050593                mv      a1,a0
   101b4:       00000693                li      a3,0
```

4. Objdump using -Ofast format




```
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   a5,0xffff0
   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>

00000000000101bc <__do_global_dtors_aux>:
   101bc:       7981c783                lbu     a5,1944(gp) # 231a0 <completed.5468>
   10140:       04079463                bnez    a5,10188 <__do_global_dtors_aux+0x4c>
   10144:       ffff0797                auipc   a5,0xffff0
   10148:       ebc78793                addi    a5,a5,-324 # 0 <main-0x100b0>
   1014c:       02078863                beqz    a5,1017c <__do_global_dtors_aux+0x40>
   10150:       ff010113                addi    sp,sp,-16
   10154:       00012517                auipc   a0,0x12
   10158:       eac50513                addi    a0,a0,-340 # 22000 <__FRAME_END__>
   1015c:       00113423                sd      ra,8(sp)
   10160:       00000097                auipc   ra,0x0
```

5.Cat Command