QEmu Installation For RISC-V

1. cmd> sudo apt install qemu-system-misc qemu-user-static binfmt-support opensbi u-boot-qemu
2. cmd> sudo apt install gcc-riscv64-linux-gnu gdb-multiarch
3. Implement "Hello World Program" using any editor.

```
        .text
        .global _start
        _start:
            addi a0, zero, 7
          addi a7, zero, 93
          ecall
```

4. cmd> riscv64-linux-gnu-as -o hello.o hello.s
5. cmd> riscv64-linux-gnu-ld -o hello.out hello.o
6. cmd> qemu-riscv64-static ./hello.out
7. cmd> echo $?
8. cmd> riscv64-linux-gnu-objdump -s -d hello.out
9. cmd> qemu-riscv64-static -g 1234 ./hello.out
10. For debugging, give these commands on another terminal.
    cmd> gdb-multiarch ./hello.out

```
        gdb> target remote :1234
        gdb> display /3i $pc        -- see next 3 instructions
        gdb> si                     -- step into (or ni)
        gdb> info registers x1 x2
        gdb> q                      -- quit
```