

Steps to run xv6 in debugging mode:

1. Go to your xv6 folder and write following command at terminal.

**make qemu-gdb**

This boot up everything but then stops and wait for a process to connect to it.

2. Open new terminal and then type **gdb**.
3. You will notice that there will be a warning of add auto load safe path. This shows you have to change your debugging directory to your xv6 debugging file which is gdbinit.
4. There are two procedures to do this:
  - a. Write following at terminal: **emacs ~/ .gdbinit**

This will open file for you. Write your path that was specified earlier in warning when you typed gdb in terminal. To save it press control+x+c.

- b. Second way is to specify the auto load path at time of running gdb using:

**gdb -q -iex "set auto-load safe-path /home/your file path" ./gdb**

5. If done properly a gdb will run. You can check by typing 'c' here which will run the qemu which was in stopped state in second terminal.
6. Now add breakpoints to your file for debugging purposes.
7. If your gdb did not run with above two commands go to the following link for more procedures to run gdb:

**[https://sourceware.org/gdb/onlinedocs/gdb/Auto\\_002dloading-safe-path.html](https://sourceware.org/gdb/onlinedocs/gdb/Auto_002dloading-safe-path.html)**

8. For more information about debugging go to following link:

**<http://zoo.cs.yale.edu/classes/cs422/2010/lec/l2-hw>**