a) Are there any modules loaded (module list) when you log in on Euler?

According to the screenshot down below, there is no modules loaded when I logged into Euler.

```
Host 'euler.engr.wisc.edu' resolved to 10.130.228.5.
Connecting to 10.130.228.5:22...
Connection established.
To escape to local shell, press 'Ctrl+Alt+]'.

WARNING! The remote SSH server rejected X11 forwarding request.
================================================================================

UPCOMING OUTAGE: 8/28 - 8/30

Announcements, outage notices, and status updates are available via the
Euler Mailing List. Sign up with a wisc.edu email address at:

https://go.wisc.edu/77vc50

================================================================================
Last login: Wed Sep  6 09:31:56 2023 from 10.138.228.43
[jyang753@euler-login-2 ~]$ ll
total 0
drwxr-xr-x. 2 jyang753 pvt-jyang753 0 Sep  6 09:32 projects
[jyang753@euler-login-2 ~]$ gcc --version
gcc (GCC) 13.1.1 20230511 (Red Hat 13.1.1-2)
Copyright (C) 2023 Free Software Foundation, Inc.
This is free software; see the source for copying conditions.  There is NO
warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

[jyang753@euler-login-2 ~]$
```

b) What version (version number) of gcc is available to you without loading any modules?

Command line:

gcc --version

gcc (GCC) 13.1.1 20230511 (Red Hat 13.1.1-2)

```
[jyang753@euler-login-2 ~]$ gcc --version
gcc (GCC) 13.1.1 20230511 (Red Hat 13.1.1-2)
Copyright (C) 2023 Free Software Foundation, Inc.
This is free software; see the source for copying conditions.  There is NO
warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
```

c) List all cuda modules available on Euler?

Command line:

module avail nvidia/cuda

```
------------------------------------------------------------ /opt/apps/lmod/modulefiles -------------------------------------------------------------
   nvidia/cuda/10.2.2    nvidia/cuda/11.3.1    nvidia/cuda/11.8.0    nvidia/cuda/12.1.0
   nvidia/cuda/11.0.3    nvidia/cuda/11.6.0    nvidia/cuda/12.0.0    nvidia/cuda/12.2.0 (D)

  Where:
   D:  Default Module

If the avail list is too long consider trying:

"module --default avail" or "ml -d av" to just list the default modules.
"module overview" or "ml ov" to display the number of modules for each name.

Use "module spider" to find all possible modules and extensions.
Use "module keyword key1 key2 ..." to search for all possible modules matching any of the "keys".
```

d) List one other piece of software that has a module on Euler and write one sentence about what it does. (If you aren't familiar with any of the other software, google one up and write a sentence about it.)

Command line:

module avail intel

intel: Intel Compilers and Libraries

```
------------------------------------------------------------ /opt/apps/lmod/modulefiles -------------------------------------------------------------
   intel/advisor/latest                intel/debugger/2023.0.0             intel/icc/2023.0.0                      intel/mkl/2022.0.1
   intel/advisor/2022.0.0              intel/debugger/2023.2.0       (D)   intel/icc/2023.2.1                (D)   intel/mkl/2023.0.0
   intel/advisor/2023.0.0              intel/dev-utilities/latest          intel/icc32/latest                      intel/mkl/2023.2       (D)
   intel/advisor/2023.2.0       (D)    intel/dev-utilities/2021.2.0        intel/icc32/2023.0.0                    intel/mkl/2023.2.0
   intel/ccl/latest                    intel/dev-utilities/2021.5.1        intel/icc32/2023.2.1              (D)   intel/mkl32/latest
   intel/ccl/2021.2.0                  intel/dev-utilities/2021.8.0        intel/init_opencl/latest                intel/mkl32/2023.0.0
   intel/ccl/2021.5.0                  intel/dev-utilities/2021.10.0 (D)   intel/init_opencl/2023.0.0        (D)   intel/mkl32/2023.2.0   (D)
   intel/ccl/2021.8.0                  intel/dnnl-cpu-gomp/latest          intel/inspector/latest                  intel/mpi/latest
   intel/ccl/2021.10.0          (D)    intel/dnnl-cpu-gomp/2021.2.0        intel/inspector/2023.0.0                intel/mpi/2021.2.0
   intel/compiler-rt/latest            intel/dnnl-cpu-gomp/2023.0.0        intel/inspector/2023.2.0          (D)   intel/mpi/2021.5.0
   intel/compiler-rt/2021.2.0          intel/dnnl-cpu-gomp/2023.2.0  (D)   intel/intel_ipp_ia32/latest             intel/mpi/2021.8.0
   intel/compiler-rt/2022.0.1          intel/dnnl-cpu-iomp/latest          intel/intel_ipp_ia32/2021.7.0           intel/mpi/2021.10.0    (D)
   intel/compiler-rt/2023.0.0          intel/dnnl-cpu-iomp/2021.2.0        intel/intel_ipp_ia32/2021.9.0     (D)   intel/oclfpga/latest
   intel/compiler-rt/2023.2.1   (D)    intel/dnnl-cpu-iomp/2023.0.0        intel/intel_ipp_intel64/latest          intel/oclfpga/2023.0.0
   intel/compiler-rt32/latest          intel/dnnl-cpu-iomp/2023.2.0  (D)   intel/intel_ipp_intel64/2021.2.0        intel/oclfpga/2023.2.0
   intel/compiler-rt32/2023.0.0        intel/dnnl-cpu-tbb/latest           intel/intel_ipp_intel64/2021.5.1        intel/oclfpga/2023.2.1 (D)
   intel/compiler-rt32/2023.2.1 (D)    intel/dnnl-cpu-tbb/2021.2.0         intel/intel_ipp_intel64/2021.7.0        intel/tbb/latest
   intel/compiler/latest               intel/dnnl-cpu-tbb/2023.0.0         intel/intel_ipp_intel64/2021.9.0  (D)   intel/tbb/2021.2.0
   intel/compiler/2021.2.0             intel/dnnl-cpu-tbb/2023.2.0   (D)   intel/intel_ippcp_ia32/latest           intel/tbb/2021.5.0
   intel/compiler/2022.0.1             intel/dnnl/latest                   intel/intel_ippcp_ia32/2021.6.3         intel/tbb/2021.8.0
   intel/compiler/2023.0.0             intel/dnnl/2021.2.0                 intel/intel_ippcp_ia32/2021.8.0   (D)   intel/tbb/2021.10.0    (D)
   intel/compiler/2023.2.1      (D)    intel/dnnl/2023.0.0                 intel/intel_ippcp_intel64/latest        intel/tbb32/latest
   intel/compiler32/latest             intel/dnnl/2023.2.0           (D)   intel/intel_ippcp_intel64/2021.2.0      intel/tbb32/2021.8.0
   intel/compiler32/2023.0.0           intel/dpct/latest                   intel/intel_ippcp_intel64/2021.5.0      intel/tbb32/2021.10.0  (D)
   intel/compiler32/2023.2.1    (D)    intel/dpct/2021.2.0                 intel/intel_ippcp_intel64/2021.5.1      intel/vpl/latest
   intel/dal/latest                    intel/dpct/2022.0.0                 intel/intel_ippcp_intel64/2021.6.3      intel/vpl/2021.2.2
   intel/dal/2021.2.0                  intel/dpct/2023.2.0           (D)   intel/intel_ippcp_intel64/2021.8.0 (D)  intel/vpl/2023.0.0     (D)
   intel/dal/2023.0.0                  intel/dpl/latest                    intel/itac/latest                       intel/vtune/latest
   intel/dal/2023.2.0           (D)    intel/dpl/2021.2.0                  intel/itac/2021.8.0                     intel/vtune/2022.0.0
   intel/debugger/latest               intel/dpl/2021.6.0                  intel/itac/2021.10.0              (D)   intel/vtune/2023.0.0
   intel/debugger/10.1.1               intel/dpl/2022.2.0            (D)   intel/mkl/latest                        intel/vtune/2023.2.0   (D)
   intel/debugger/2021.5.0             intel/icc/latest                    intel/mkl/2021.2.0
```