

1.

```
(base) ishaanmahajan@Ishaans-MacBook-Air ~ % docker run --user="$(id -u):$(id -g)" -v $HOME:/home/$USER -e HOME=/home/$USER -it --gpus all -p 8080:8080 me468
WARNING: The requested image's platform (linux/amd64) does not match the detected host platform (linux/arm64/v8) and no specific platform was requested
docker: Error response from daemon: could not select device driver "" with capabilities: [[gpu]].
ERROR[0001] error waiting for container: context canceled
(base) ishaanmahajan@Ishaans-MacBook-Air ~ %
```

2.

```
Last login: Fri Apr 15 16:50:50 2022 from 10.138.221.64
[mahajan@euler-login-2]~% ls
hello_output-173121.txt hello_output-173125.txt hello_output-173126.txt hello_slurm.sh
[mahajan@euler-login-2]~% vim hello_slurm.sh
[mahajan@euler-login-2]~% sbatch hello_slurm.sh
Submitted batch job 173373
[mahajan@euler-login-2]~% cat hello_output-173373.txt
INFO: Converting OCI blobs to SIF format
WARNING: 'nodev' mount option set on /tmp, it could be a source of failure during build process
INFO: Starting build...
Getting image source signatures
Copying blob sha256:2db29710123e3e53a794f2694094b9b4338aa9ee5c40b930cb8063a1be392c54
Copying config sha256:811f3caa888b1ee5310e2135cfd3fe36b42e233fe0d76d9798ebd324621238b9
Writing manifest to image destination
Storing signatures
2022/04/19 03:31:31 info unpack layer: sha256:2db29710123e3e53a794f2694094b9b4338aa9ee5c40b930cb8063a1be392c54
INFO: Creating SIF file...
WARNING: passwd file doesn't exist in container, not updating
WARNING: group file doesn't exist in container, not updating

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
   (amd64)
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/

[mahajan@euler-login-2]~% |
```

3. Output of -

a. Contents of /home -

```
me468
```

b. Hostname -

```
euler01.wacc.wisc.edu
```

c. nvidia-smi

```
[mahajan@euler-login-2]~/ME468/Assignments/Assignment10% cat ~/nvidia.out
Tue Apr 19 21:18:27 2022
```

NVIDIA-SMI 510.47.03				Driver Version: 510.47.03		CUDA Version: 11.6	
GPU	Name	Persistence-M	Bus-Id	Disp.A	Volatile	Uncorr. ECC	
Fan	Temp	Perf	Pwr:Usage/Cap	Memory-Usage	GPU-Util	Compute M.	MIG M.
0	NVIDIA GeForce ...	On	00000000:02:00.0	Off		N/A	
0%	29C	P8	6W / 180W	1MiB / 8192MiB	0%	Default	N/A

Processes:							
GPU	GI	CI	PID	Type	Process name	GPU Memory	
ID	ID	ID				Usage	
No running processes found							

d. ros2

```
[mahajan@euler-login-2]~/ME468/Assignments/Assignment10% cat ~/ros2.out
usage: ros2 [-h] Call `ros2 <command> -h` for more detailed usage. ...

ros2 is an extensible command-line tool for ROS 2.

optional arguments:
  -h, --help            show this help message and exit

Commands:
  action                Various action related sub-commands
  bag                   Various rosbag related sub-commands
  component             Various component related sub-commands
  daemon               Various daemon related sub-commands
  doctor                Check ROS setup and other potential issues
  interface             Show information about ROS interfaces
  launch               Run a launch file
  lifecycle             Various lifecycle related sub-commands
  multicast             Various multicast related sub-commands
  node                  Various node related sub-commands
  param                Various param related sub-commands
  pkg                   Various package related sub-commands
  run                   Run a package specific executable
  security              Various security related sub-commands
  service              Various service related sub-commands
  topic                Various topic related sub-commands
  wtf                   Use `wtf` as alias to `doctor`

Call `ros2 <command> -h` for more detailed usage.
```

e. python3 demo_SEN_camera.py

```
call ROS2 command -h for more detailed usage.
[mahajan@euler-login-2]~/ME468/Assignments/Assignment10% cat ~/script.out
Loading PTX: /home/me468/chrono/build/lib/sensor_ptx/ChronoEngine_sensor_generated_box.cu.ptx
Loading PTX: /home/me468/chrono/build/lib/sensor_ptx/ChronoEngine_sensor_generated_sphere.cu.ptx
Loading PTX: /home/me468/chrono/build/lib/sensor_ptx/ChronoEngine_sensor_generated_cylinder.cu.ptx
Loading PTX: /home/me468/chrono/build/lib/sensor_ptx/ChronoEngine_sensor_generated_material_shaders.cu.ptx
Loading PTX: /home/me468/chrono/build/lib/sensor_ptx/ChronoEngine_sensor_generated_camera.cu.ptx
Loading PTX: /home/me468/chrono/build/lib/sensor_ptx/ChronoEngine_sensor_generated_lidar.cu.ptx
Loading PTX: /home/me468/chrono/build/lib/sensor_ptx/ChronoEngine_sensor_generated_radar.cu.ptx
Loading PTX: /home/me468/chrono/build/lib/sensor_ptx/ChronoEngine_sensor_generated_miss.cu.ptx
Shader compile time: 2.93017
WARNING: requested window could not be created by GLFW. Will proceed with no window.
Sim time: 20.0 Wall time: 1.8366765975952148
[mahajan@euler-login-2]~/ME468/Assignments/Assignment10% |
```