Cuda program

ubuntu@ubuntu-OptiPlex-3090:~$ lspci | grep -i nvidia
01:00.0 VGA compatible controller: NVIDIA Corporation GK208B [GeForce GT 730] (rev a1)
01:00.1 Audio device: NVIDIA Corporation GK208 HDMI/DP Audio Controller (rev a1)
ubuntu@ubuntu-OptiPlex-3090:~$ uname -m && cat /etc/*release
x86_64
DISTRIB_ID=Ubuntu
DISTRIB_RELEASE=18.04
DISTRIB_CODENAME=bionic
DISTRIB_DESCRIPTION="Ubuntu 18.04.6 LTS"
NAME="Ubuntu"
VERSION="18.04.6 LTS (Bionic Beaver)"
ID=ubuntu
ID_LIKE=debian
PRETTY_NAME="Ubuntu 18.04.6 LTS"
VERSION_ID="18.04"
HOME_URL="https://www.ubuntu.com/"
SUPPORT_URL="https://help.ubuntu.com/"
BUG_REPORT_URL="https://bugs.launchpad.net/ubuntu/"
PRIVACY_POLICY_URL="https://www.ubuntu.com/legal/terms-and-policies/privacy-policy"
VERSION_CODENAME=bionic
UBUNTU_CODENAME=bionic
ubuntu@ubuntu-OptiPlex-3090:~$ gcc –version

ubuntu@ubuntu-OptiPlex-3090:~$ uname -r
5.4.0-148-generic
ubuntu@ubuntu-OptiPlex-3090:~$ wget
https://developer.download.nvidia.com/compute/cuda/repos/ubuntu1804/x86_64/cuda-ubuntu1804.pin

ubuntu@ubuntu-OptiPlex-3090:~$ sudo mv cuda-ubuntu1804.pin /etc/apt/preferences.d/cuda-repository-pin-600
ubuntu@ubuntu-OptiPlex-3090:~$ wget
https://developer.download.nvidia.com/compute/cuda/12.1.1/local_installers/cuda-repo-ubuntu1804-12-1-local_12.1.1-530.30.02-1_amd64.deb

ubuntu@ubuntu-OptiPlex-3090:~$ sudo dpkg -i cuda-repo-ubuntu1804-12-1-local_12.1.1-530.30.02-1_amd64.deb
ubuntu@ubuntu-OptiPlex-3090:~$ sudo cp /var/cuda-repo-ubuntu1804-12-1-local/cuda-4312AF5D-keyring.gpg /usr/share/keyrings/
ubuntu@ubuntu-OptiPlex-3090:~$ sudo cp /var/cuda-repo-ubuntu1804-12-1-local/cuda-*-keyring.gpg /usr/share/keyrings/
ubuntu@ubuntu-OptiPlex-3090:~$ sudo apt-get update

ubuntu@ubuntu-OptiPlex-3090:~$ sudo apt-get -y install cuda

ubuntu@ubuntu-OptiPlex-3090:~/Desktop$ sudo apt install nvidia-cuda-toolkit
ubuntu@ubuntu-OptiPlex-3090:~/Desktop$ gedit hello.cu

hello.cu

```c
#include "stdio.h"
int main()
{
printf("Hello, world\n");
return 0;
}
```

```
ubuntu@ubuntu-OptiPlex-3090:~/Desktop$ nvcc hello.cu
ubuntu@ubuntu-OptiPlex-3090:~/Desktop$ ./a.out
Hello, world
```