```
!nvidia-smi
```

```
Mon Mar 18 08:48:45 2024
+-----------------------------------------------------------------------------------------+
| NVIDIA-SMI 535.104.05              Driver Version: 535.104.05    CUDA Version: 12.2      |
|-----------------------------------------+----------------------+----------------------+
| 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  Tesla T4                       Off | 00000000:00:04.0 Off |                    0 |
| N/A  54C    P8               10W /  70W |     0MiB / 15360MiB |      0%      Default |
|                                         |                      |                  N/A |
+-----------------------------------------+----------------------+----------------------+

+-----------------------------------------------------------------------------------------+
| Processes:                                                                              |
|  GPU   GI   CI        PID   Type   Process name                              GPU Memory |
|        ID   ID                                                               Usage      |
|=========================================================================================|
|  No running processes found                                                             |
+-----------------------------------------------------------------------------------------+
```

```
!pip install git+https://github.com/andreinechaev/nvcc4jupyter.git
```

```
Collecting git+https://github.com/andreinechaev/nvcc4jupyter.git
  Cloning https://github.com/andreinechaev/nvcc4jupyter.git to /tmp/pip-req-build-50z_aztu
  Running command git clone --filter=blob:none --quiet https://github.com/andreinechaev/nvcc4jupyter.git /tmp/pip-req-bu
  Resolved https://github.com/andreinechaev/nvcc4jupyter.git to commit 781ff5b76ba6c4c2d80dcbbec9983e147613cc71
  Installing build dependencies ... done
  Getting requirements to build wheel ... done
  Preparing metadata (pyproject.toml) ... done
Building wheels for collected packages: nvcc4jupyter
  Building wheel for nvcc4jupyter (pyproject.toml) ... done
  Created wheel for nvcc4jupyter: filename=nvcc4jupyter-1.1.0-py3-none-any.whl size=8012 sha256=11030cefed81657563138c04
  Stored in directory: /tmp/pip-ephem-wheel-cache-0dh1q02k/wheels/a8/b9/18/23f8ef71ceb0f63297dd1903aedd067e6243a68ea756d
Successfully built nvcc4jupyter
Installing collected packages: nvcc4jupyter
Successfully installed nvcc4jupyter-1.1.0
```

```
!pip install nvcc4jupyter
```

```
Requirement already satisfied: nvcc4jupyter in /usr/local/lib/python3.10/dist-packages (1.1.0)
```

```
%load_ext nvcc4jupyter
```

```
Source files will be saved in "/tmp/tmp42vp25tf".
```

```
%%cuda
#include <stdio.h>

__global__ void hello(){
    printf("Hello from block: %u, thread: %u\n", blockIdx.x, threadIdx.x);
}

int main(){
    hello<<<2, 2>>>();
    cudaDeviceSynchronize();
}
```

```
Hello from block: 0, thread: 0
Hello from block: 0, thread: 1
Hello from block: 1, thread: 0
Hello from block: 1, thread: 1
```

```
!nvcc --version
```

```
nvcc: NVIDIA (R) Cuda compiler driver
Copyright (c) 2005-2023 NVIDIA Corporation
Built on Tue_Aug_15_22:02:13_PDT_2023
Cuda compilation tools, release 12.2, V12.2.140
Build cuda_12.2.r12.2/compiler.33191640_0
```

```
%%cuda
#include <stdio.h>

__global__ void hello(){
    printf("Hello from block: %u, thread: %u\n", blockIdx.x, threadIdx.x);
}

int main(){
    hello<<<3, 6>>>();
    cudaDeviceSynchronize();
}

    Hello from block: 2, thread: 0
    Hello from block: 2, thread: 1
    Hello from block: 2, thread: 2
    Hello from block: 2, thread: 3
    Hello from block: 2, thread: 4
    Hello from block: 2, thread: 5
    Hello from block: 0, thread: 0
    Hello from block: 0, thread: 1
    Hello from block: 0, thread: 2
    Hello from block: 0, thread: 3
    Hello from block: 0, thread: 4
    Hello from block: 0, thread: 5
    Hello from block: 1, thread: 0
    Hello from block: 1, thread: 1
    Hello from block: 1, thread: 2
    Hello from block: 1, thread: 3
    Hello from block: 1, thread: 4
    Hello from block: 1, thread: 5
```