COA ASSIGNMENT 1

GPGPU SIM

Group 9:

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IMPLEMENTATION:

The following commands have been tested in Ubuntu v20.04.6, gcc 7.5.0, g++ 7.5.0 and NVIDIA CUDA 11.1.0.

STEP1(Commands):

- *sudo apt install gcc-7*
- *sudo apt install g++-7*
- *sudo apt install git*
- *sudo apt install python3-pip*
- *sudo apt-get install build-essential xutils-dev bison zlib1g-dev flex libglu1-mesa-dev*
- *sudo apt-get install doxygen graphviz*
- *sudo apt-get install python-pmw python3-ply python3-numpy libpng-dev python3-matplotlib*
- *sudo apt-get install libxi-dev libxmu-dev freeglut3-dev*
- *git clone https://github.com/gpgpu-sim/gpgpu-sim_distribution*
- *wget https://developer.download.nvidia.com/compute/cuda/11.1.0/local_installers/cuda_11.1.0_455.23.05_linux.run*
- *sudo sh cuda_11.1.0_455.23.05_linux.run* (this will open a window; type accept and then select everything except the driver and proceed with the installation)

STEP2(Commands): (Building the files)

- *cd gpgpu-sim_distribution*
- *export CUDA_INSTALL_PATH=/usr/local/cuda*
- *bash*
- *source setup_environment*
- *make*

STEP3(Commands):

- *cd*
- *nano .bashrc (opens bash file) inside the bash file, go to the end and enter the following:*

  export PATH="/usr/local/cuda-11.1/bin:$PATH"

  export_LD_LIBRARY_PATH="/usr/local/cuda-11.1/lib64:$LD_LIBRARY_PATH"
  Then, Ctrl+S to save the file and Ctrl+X to close the file.

- *source .bashrc*
- *mkdir test*
- *cd test*
- *touch test.cu*

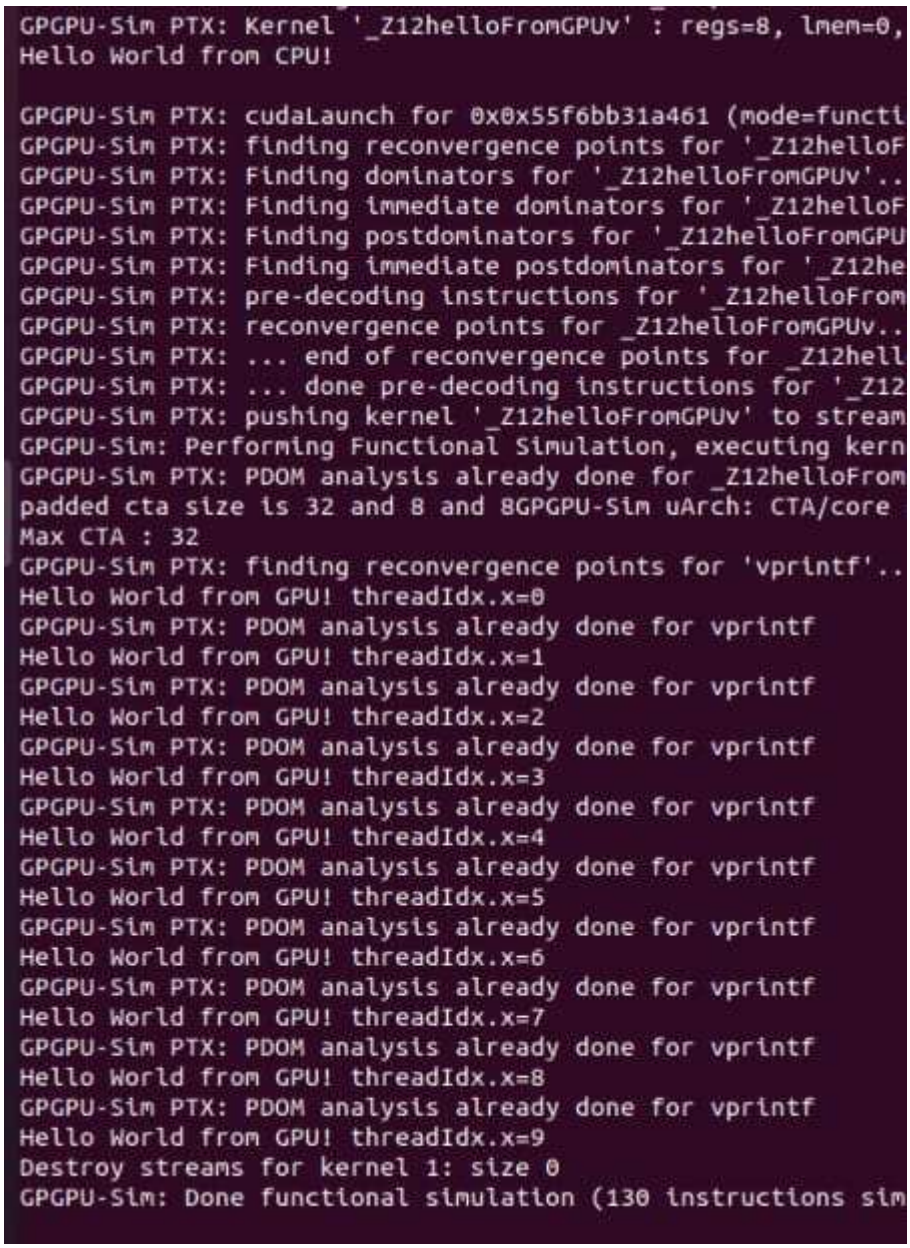
Our sample "Hello World!" program:

After this, open test.cu in /home/test folder and paste the below code:

Running our “Hello World” through terminal:

- Save test.cu and quit the file.
- *cp -r ~/gpgpu-sim_distribution/configs/tested-cfgs/SM75_RTX2060/* ./*
- *source ~/gpgpu-sim_distribution/setup_environment*
- *nvcc -test.cu -lcudart*
- *./a.out*

OUTPUT:



GROUP SUGGESTIONS:

- Organize Installation Steps: Create a clear step-by-step installation guide with headings for each software/package to be installed. This will make it easier for readers to follow along and understand the installation process.

- Include System Requirements: Before listing the installation steps, mention the system requirements such as the recommended operating system version, hardware specifications, and any other dependencies required to run the project successfully.

- Mention Version Numbers: When installing packages, specify the version numbers to ensure consistency and compatibility. For example, instead of just "*sudo apt install gcc*," it's better to use "*sudo apt install gcc-7*" to be more specific about the version.

- Include Troubleshooting Tips: Anticipate common issues that users may face during the installation process and provide troubleshooting tips or links to relevant resources. This will help users overcome obstacles without having to search for solutions elsewhere.

- Include Update Instructions: If applicable, include instructions for updating the project in the future. This will help users keep their installation up-to-date and take advantage of any new features or bug fixes