

ECE571: Advanced Microprocessor Design – Homework 11
Fall 2022

Due: Thursday 1 December 2022, 2:00pm

Create a document that contains the answers to the questions below. A .pdf or .txt file is preferred but I can accept MS Office or Libreoffice format if necessary.

1. Read/Skim the following article:

- **NVIDIA Hopper GPU Architecture and H100 Accelerator Announced: Working Smarter and Harder** by Ryan Smith

<https://www.anandtech.com/print/17327/nvidia-hopper-gpu-architecture-and-h100-accelerator-announced>

- Answer the following questions:
 - (a) How much power will a H100 card draw?
 - (b) What is a confidential virtual machine?
 - (c) What is NVLink?

2. Also read/skim this NVIDIA Developer Blog Post:

- **NVIDIA Hopper Architecture In-Depth** by Andersch, Palmer, Krashinsky, Stam, Mehta, Brito and Ramswamy , 22 March 2022

<https://developer.nvidia.com/blog/nvidia-hopper-architecture-in-depth/>

- Answer the following questions:
 - (a) What is the advantage of HBM3 memory?
 - (b) What is asynchronous execution?
 - (c) This is not in the article, but can you buy a board with an H100 in it? How much would it cost?

3. Submitting your work.

- Create the document containing the answers to the questions asked.
- Please make sure your name appears in the document.
- e-mail the file to me by the homework deadline.