

ECE571: Advanced Microprocessor Design – Homework 11
Spring 2017

Due: Tuesday 25 April 2017, 11:00am

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 the following website article:

- **ARM Reveals Cortex-A72 Architecture Details** by Andrei Frumusanu

<http://www.anandtech.com/show/9184/arm-reveals-cortex-a72-architecture-details>

- **A walk through of the Microarchitectural improvements in Cortex-A72**

<https://community.arm.com/groups/processors/blog/2015/05/04/a-walk-through-of-the-microarchitectural-improvements-in-cortex-a72>

2. Answer the following questions:

- (a) List two changes in the Cortex-A72 that improve performance.
- (b) List two changes in the Cortex-A72 that improve power consumption.

3. Read the following website articles:

- **NVIDIA Announces Jetson TX1 - A Tegra X1 Module & Development Kit**
by Ryan Smith

<http://www.anandtech.com/show/9779/nvidia-announces-jetson-tx1-tegra-x1-module-development-kit>

4. Answer the following questions:

- (a) In the Jetson article, what kind of workloads does the author think NVidia is now focusing on?
- (b) Why had NVidia moved to a “mobile first” strategy?
- (c) Name one power optimization that was made in the Maxwell architecture.

5. 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.