Faculty of Media Engineering and Technology
Dept. of Computer Science and Engineering
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CSEN 702: Microprocessors
Winter 2020

Project

You need to form a group of 2 to 4 students and then you have the option to choose one of the following formats for your project:

Option 1: Research

In this option, you are required to choose a topic from one of the course topics (advanced pipelining, branch predictions, memory hierarchy, scheduling, multiple issue, multi core,.. and so on) and conduct a search about the latest advancements in the chosen topic (or sub-topic) by searching at least 4 for recent papers (2016 and above) in IEEE, ACM, Elsevier, Springer and others.
You are required to write a survey paper containing an introduction, a well-written summary of the papers and their results. In addition, you may suggest adding or changing or enhancing any of the proposed works and include this in your paper.
Deliverables: A 4-page (or above) two-columned paper with references, as well as a copy of all the papers you used in your paper. A template of this paper will be provided to you.

Option 2: Applied project

In this option, you will develop a simulator (in java, C) or any other language you're comfortable with for the Tomasulo algorithm. Your simulator should should accept inputs (mips instructions) and show step by step how these instructions are executed as well as the content of each component). The better the interface of your project (command line, GUI,...) and the UX, the higher the grade.
Deliverables: A project with demo video and a small report explaining the steps you did to develop and run and test your code. Copying a project from the internet will get you a zero.

Notes and deadlines:

The work should be divided equally among all group members according to the complexity of the project and its content. An equal grade for all group members is not guaranteed.

Group forming: Deadline December 27. A separate email will be sent to fill the names of the group in Google forms.

Project submission Deadline: January 11