Exam Philosophy

What the exam looks like:
- Definitions, comparisons, advantages & disadvantages
  - What is it?
  - How dies it work?
  - Why have it?
  - Pay particular attention to the terminology that was highlighted in the slides
- Apply the concepts and techniques you have learned to situations you have (hopefully) not seen before.

The goal is to test your knowledge of the material and how well you can apply it, **not how fast you can tell me what you know**.
- Teddy or Mark will take the exam beforehand to make sure that they can finish it in **half** the time you will have

Topics

Techniques to reduce branch delays
- Dynamic branch prediction & its hardware structures
- Branch target buffers & return stacks
- Factors that determine branch performance

Static & dynamic scheduling
- Techniques for static scheduling
- Implementations of dynamic scheduling
  - Tomasulo
  - Physical register pool
- Precise interrupts
- Compiler techniques to provide better schedules

Caches
- Hardware & compiler techniques that improve cache performance
- Factors that determine cache performance