

# CompArch Final Project Proposal

## Topic

Understanding Sandy Bridge

## Team Members

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## Brief Project Description

Throughout this semester, we learned about the different components of a CPU, designing and building our own submodules, and eventually putting them together to make a single-cycle CPU. The Olin laptops have Ivy Bridge chips that use the Sandy Bridge microarchitecture. Thus, this is a research project to understand the applications of what we have learned in class in modern computing.

## References

Intel Architectures Optimization Manual

<http://www.intel.com/content/www/us/en/architecture-and-technology/64-ia-32-architectures-optimization-manual.html>

Computer Organization, Design, and Architecture

<https://books.google.com/books?id=m5KlAgAAQBAJ&lpg=PA411&ots=KoLl8GZsuS&dq=intel%20sandy%20bridge%20optimization%20reference%20manual&pg=PA411#v=onepage&q=intel%20sandy%20bridge%20optimization%20reference%20manual&f=false>

How Sandy Bridge Works

<http://computer.howstuffworks.com/sandy-bridge.htm>

## Other Recommended Resources

- [Computer Architecture - A Quantitative Approach](#) (the successor to Computer Organization - both available through Olin Library)
- [Real World Technologies](#)
- [AnandTech](#)
- [ExtremeTech](#), [HardwareSecrets](#)

## Deliverables

- Minimum/Planned – A report and slidedeck explaining Sandy Bridge and highlighting some more complex terms that were not covered in class
- Stretch – Minimum/Planned + a comparison with the AMD processor

## Work Plan

- 11/30 – Project proposal draft due
- 12/1 – Project proposal revision due
- 12/8 – Finish researching

- 12/11 – Finish draft of report
- 12/15 – Report due

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	<b>11/30</b>	<b>12/1</b>	12/2	12/3	12/4	12/5
12/6	12/7	<b>12/8</b>	12/9	12/10	<b>12/11</b>	12/12
12/13	12/14	<b>12/15</b>	12/16	12/17	12/18	12/19