- CPSC 275: Introduction to Computer Systems

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Fall 2025

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Homework 13

NOTE: You are not required to hand in the following exercises, but you are strongly encouraged to complete them to strengthen your understanding of the concepts covered in class.

1. Read Diving into Assembly: Basics to learn more about the machine code generated by `gcc` and to become familiar with the registers in IA-32.

2. Explain how the Intel x86 architecture achieves backward compatibility through register naming (e.g., `al` → `ax` → `eax`).

3. What are the trade-offs of maintaining backward compatibility in modern processor design?

4. Draw or label the relationship among `al`, `ah`, `ax`, and `eax` to illustrate how Intel extended register width across generations.

- **Welcome: Sean**
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