



CS 185C: History of Computing

Fall 2011

Instructor: Prof. Ron Mak



How did computer architectures, software applications, and programming languages evolve to their present state? Why were certain paths taken but others abandoned throughout the history of computing? By learning the lessons of how past architects and designers overcame the technological, economic, and societal constraints of their day, we can become better architects and designers in our present day.

Students will work in small project teams to research the history of computing. Based on the team members' interests and with the instructor's consent, each team will devise a project that investigates some historic hardware or software artifact or methodology, a legendary computing pioneer or company, or the evolving impact of computing on work and society. All projects will rely on original sources.

Example projects include

- Restore a historic hardware or software artifact.
- Create a software simulation of a legendary computer architecture.
- Chronicle the early history and legacy of a pioneering computing company or organization such as Control Data Corporation, Burroughs Corporation, Wang Laboratories, Digital Equipment Corporation, Zilog, Xerox PARC, and others.
- Investigate past programming languages and demonstrate their influences on today's languages and programming paradigms.
- Trace the advancement of business or scientific data processing applications over the decades as application requirements and computing technologies evolved.
- Study the impact of computing on society from the punched-card culture to the Web and social networking.
- Collect, analyze, categorize, and index original software, documentation, and other artifacts related to a particular technology.
- Interview industry pioneers and videotape and record their oral histories.

Students will have access to the archives of the Computer History Museum in Mt. View and other historical repositories. Industry pioneers and veterans have agreed to be project advisors and guest lecturers for this class.

Each project team will present oral progress reports of its activities during the semester to the rest of the class. Final deliverables will be research results that can be submitted to the Computer History Museum, posted to websites devoted to computing history, or published in journals such as the *IEEE Annals of the History of Computing*.

PREREQUISITES: Basic knowledge of at least one of the following: computer architecture, software engineering, business or scientific applications, or programming languages.