Objectives

• What is a profession?
• What responsibilities and obligations do professionals have to their respective organizations and society?
• What role does an organization play to ensure that professionals within the organization strive to behave morally?

Case: Fighting Injustice

• Is Ms. McFarland justified in firing Rachael?
• Suppose Rachael was merely a student who had nothing to do with IT services, and that she happened to come across this information in the same way:
  – Should her actions be considered differently?
  – Would the morality of the situation change at all?
• Did Professor Paige behave ethically when she asked Rachael to log her off rather than doing it herself?
Technological Associations

- **Association for Computing Machinery**: The world’s first scientific and educational computing society – Founded in 1947
- **Institute of Electrical and Electronics Engineers**: a non-profit professional association dedicated to advancing technological innovation and excellence

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**Case: Refusing to Do a Favor for a Friend**

- Did Greg do the right thing in refusing Michael’s request to submit his homework for him?
- Does the university’s Code of Student Conduct still apply to Greg, despite him not being a student anymore?
- If you had the chance to write a code of ethics, what would you write about this type of situation?

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**Case: Refusing to Do a Favor for a Friend (continued)**

- Is there actually any rule in the ACM or IEEE Software Engineering Code of Ethics and Professional Practice that supports Greg’s decision?
- Would Greg have been breaking any rules if he did help his friend with submitting the paper?
Why We Care about Professional Standards of Computing

- The privacy, safety, and well-being of the general public often depends on computer software
  - Therac-25 radiation machine for breast cancer treatment
  - Braking software in the 2010 Toyota Prius

Defining “Profession”

- According to Michael Bayles, a professional:
  - requires extensive training
  - involves significant intellectual effort
  - provides an important service to society
  - often requires certification or licensing
  - often has an organization of members
  - often is autonomous in one’s work

Defining “Profession”

- No single definition of “profession” is accepted by everyone
- Does having a license turn you into a professional?
  - In the US, you need a license to practice medicine or law.
  - You also need a license to be an airline pilot, a plumber, or a liquor vendor.
Defining “Profession” (continued)

• Unless you practice in Texas, you do not need a license to be a software engineer.

Good Works Project

• **Good Works Project**: A research project conducted at Harvard Graduate School of Education to examine how young people deal with ethical problems in their professions

  – defines a profession as any career in which the worker is awarded a degree of autonomy in return for services to the public that are performed at a high level

Kultgen’s Attributes of Professions

• **John Kultgen**: professor at the University of Missouri, Columbia, who presents twenty attributes compiled by sociologist Geoffrey Millerson from twenty-one scholars of sociology as necessary for a vocation to be considered a profession
Kultgen’s Attributes of a Profession (continued)

- A profession:
  - involves a skill based on a theoretical foundation
  - requires extensive education
  - requires passing an exam
  - is organized and represented by one or more professional organizations
  - adheres to a code of conduct
  - provides altruistic service
  - requires members to assume responsibility for the affairs of others

Kultgen’s Attributes of a Profession (continued)

- Core characteristics of a profession:
  - is indispensable for the public good
  - members are licensed so their work is sanctioned by the community
  - Members are independent practitioners, serving individual clients
  - Members do their best to serve their clients impartially without regard to any special relationship
  - Members are compensated by fees of fixed charges

Kultgen’s Attributes of a Profession (continued)

- Additional characteristics of a profession:
  - Members are highly loyal to their colleagues
  - Members regularly contribute to professional development
  - Members’ prestige is based on guaranteed service
  - Members use individual judgment in applying their profession
  - The work is not manual
  - Profits do not depend on capital
  - Professional status is widely recognized
Professions and Codes (continued)

- What occupations, other than law and medicine, would you consider to be professions? How well does each fit into Kultgen’s thirteen core attributes?
- Does medicine have all of Kultgen’s thirteen core attributes?
- How about law? What attributes might be missing?

A Moral Basis for Professions

- According to Michael Davis, a profession:
  - is a number of individuals in the same occupation voluntarily organized to earn a living by openly serving a certain moral ideal in a morally permissible way beyond what law, market, and morality would otherwise require.
- According to Davis, “a professional puts profession first”

Ethical Standards

- Are there any ethical concerns with choosing a startup company, with relatively inexperienced workers, over a proven company for a project that deals with constructing software for a hospital?
  - Suppose the startup asked for $100,000 to finish the job in six months, and the other company quotes $300,000 to finish the job in two years. Is it acceptable to choose the startup?
A Trick Question

• Suppose you are a practicing professional, and you find out that your client has been bribing city officials to get inside information on bids for city projects.
  – Should you report your client to the authorities or keep his confidence?
    • It depends on the profession:
      Lawyer?
      Physician?
      Reporter?

Case: Pornography on a University Computer

• Imagine you were Sheila, and you discovered pornographic videos on the dean’s university computer. What would you do?
• Might there be repercussions to Sheila for looking at data that had not been her business? Make an argument as to why or why not Sheila should mention her discovery to the dean.

Case: Going into Business

• Explain why Antonio’s actions would be considered moral from an act utilitarian standpoint.
• Do Antonio’s actions adhere to the ACM Code of Ethics?