Professional Ethics

- We described "professional ethics" as one of the three main perspectives through which computer ethics issues can be identified and analyzed.

- When applied to computing, *professional ethics* is a field of applied ethics concerned with moral issues that impact computer professionals.
Why a Separate Category of Professional Ethics?

- The same ethical rules involving honesty, fairness, and so forth should apply to professionals as well as to ordinary individuals.

- So, if it is wrong for ordinary people to steal, cheat, lie, and so forth, then it is wrong for professionals to do so as well.

- Thus, one might conclude that a separate field of study called "professional ethics" is not really needed.
Ethicists argue that some moral issues affecting professionals are sufficiently distinct and specialized to warrant a separate field of study.

Some also argue that professionals can have special moral obligations that exceed those of ordinary individuals.

To grasp the arguments for this view, it is useful first to understand what is meant by the terms *profession* and *professional*.
What Exactly is a Profession?

- A profession can be understood in terms of the *attributes and requirements of a professional practice*, such as "calling in which special knowledge and skill are used in...the service of mankind." (Firmage, 1991)

- Robert Barger (2008) believes that professions are occupational fields distinguishable in terms of two characteristics:
  - Expert knowledge
  - Autonomy with respect to “independence in conducting one’s professional practice”
Who is a Professional?

- *Professionals* who comprise a given profession also tend to have certain defining attributes.

- Medical doctors, lawyers, accountants, etc. find themselves in situations in which their decisions and actions can have significant social effects, and have roles and responsibilities that exceed those of ordinary individuals.

- Sometimes these roles and responsibilities *differentiate* professionals from others.
Who is a Computer Professional?

- A computer professional might be interpreted to mean anyone who is employed in the computer, information-technology, or information/communications fields.

- Or a computer professional might be thought of in more narrow terms, in which case only software engineers would be included.

- There are various gradients in between the two ends of this spectrum.
Definition of a Computer Professional (Continued)

- A computer professional could be defined in such a way that, in addition to software engineers, software quality analysts, software technical writers, and software managers and supervisors.

- A software engineering team includes those who contribute by direct participation to the analysis, specification, design, development, certification, maintenance, and testing of software systems.
Do Computer Professionals Have Special Responsibilities?

- Gotterbarn (1999) believes that because software engineers and their teams have significant opportunities to:
  - Do good or cause harm
  - Enable others to do good or cause harm
  - Influence others to do good or cause harm.
Critical-Safety Software

- Gotterbarn suggests that the roles and responsibilities involved in the development of safety-critical systems is a differentiating factor.

- A "safety-critical system" is often used to refer to computer systems that can have a direct life-threatening impact.
Safety-Critical Software (Continued)

- Examples of safety-critical software systems and applications typically include:
  - Aircraft and air traffic control systems
  - Mass transportation systems
  - Nuclear reactors missile systems
  - Medical treatment systems.
Additional Safety-Critical Systems

- Bowyer (2002) extends the range of safety-critical applications to include software used in the:
  - Design of bridges and buildings;
  - Election of water disposal sites;
  - Development of analytical models for medical treatment.
Professional Codes of Ethics

- Many professions have established professional societies, which in turn have adopted codes of conduct.

- The medical profession established the AMA (American Medical Association),

- The legal profession established the ABA (American Bar Association).

- Both associations have formal codes of ethics/conduct for their members.
The computing profession has also has professional societies.

The two largest are:
- The Association for Computing Machinery (ACM);
- The Institute for Electrical and Electronics Engineers – Computer Society (IEEE-CS).

Both organizations have adopted professional codes of ethics.
IEEE codes of ethics

- Accept responsibility in making engineering decision consist with the safety, and welfare
- Avoid real conflicts of interest wherever possible
- Be honest
- Reject bribery in all forms
ACM code

- Contribute to society and human well being
- Avoid harm to others
- Be honest and trustworthy
- Be fair and take action not to discriminate
- Honor property copy and patents
- Give proper credits to IP
- Respect the privacy of others
Professional codes of ethics are often designed to motivate members of an association to behave in certain ways.

Four primary functions of codes are to:

- inspire
- educate
- guide
- responsibilities
- discipline the members.
Criticisms of Professional Codes

- Ladd (1995) argues that ethical codes rest on a series of confusions that are both
  - “Intellectual
  - Moral."
- His argument has three main points.
  First:
  - “Open-ended,
  - Reflective,
  - Critical intellectual activity."
  Second:
  - Codes introduce confusions with respect to *micro-ethics* vs. *macro-ethics*.
  Third:
  - Giving codes a disciplinary function makes them more like legal than ethical rules.
Ladd criticism of professional codes

- No clear action is defined when two or more of a code’s principle or directive conflict with one another
- Microethical issues apply to personal relationships between individual professionals and other individual
- Macroethical apply to social problem that confronts members of a profession collectively
Gotterbarn argues that we need to distinguish between:

- codes of *ethics*;
- codes of *conduct*;
- codes of *practice*.
In Defense of Professional Codes (Continued)

- *Codes of ethics* as "aspirational," because they often serve as mission statements for the profession and thus can provide vision and objectives.

- *Codes of conduct* are oriented more toward the professional and the professional's attitude and behavior.

- *Codes of practice* relate to operational activities within a profession.
Table 4-1: Some Strengths and Weaknesses of Professional Codes

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
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<tr>
<td>Codes inspire the members of a profession to behave ethically.</td>
<td>Directives included in many codes tend to be too general and too vague.</td>
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<tr>
<td>Codes guide the members of a profession in ethical choices.</td>
<td>Codes are not always helpful when two or more directives conflict.</td>
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<tr>
<td>Codes educate the members of a profession about their professional obligations.</td>
<td>A professional code’s directives are never complete or exhaustive.</td>
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<tr>
<td>Codes discipline members when they violate one or more of the code’s directives.</td>
<td>Codes are ineffective (have no “teeth”) in disciplinary matters.</td>
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<tr>
<td>Codes “sensitize” members of a profession to ethical issues and alert them to ethical aspects they otherwise might overlook.</td>
<td>Codes do not help us distinguish between micro-ethics issues and macro-ethics issues.</td>
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<tr>
<td>Codes inform the public about the nature and roles of the profession.</td>
<td>Directives in codes are sometimes inconsistent with one another.</td>
</tr>
<tr>
<td>Codes enhance the profession in the eyes of the public.</td>
<td>Codes can be self-serving for the profession.</td>
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Conflicts of Professional Responsibility: Employee Loyalty and Whistle-blowing

- What exactly is employee loyalty?
- Do employees and employers have a special obligation of loyalty to each other?
- Should loyalty to one’s employer ever preclude an employee’s "blowing the whistle" in critical situations?
- In which cases can whistle-blowing be justified?
Do Employees Have a Special Obligation to Employers?

- Some believe we have a *prima facie* obligation of loyalty in employment contexts.

- In other words, all things being equal, an employee should be loyal to his or her employer and *visa versa*.
Does employee loyalty still make sense in the context of a large computer corporation?

- Duska (1991) argues that in employment contexts, loyalty only arises in special relationships based on a notion that he calls "mutual enrichment."

- So in relationships in which parties are pursuing their self-interests, the notion of loyalty would not be applicable.
Duska believes that employer-employee relationships – at least where corporations are concerned – are based on self-interest and not on mutual enrichment.

He concludes that employees should not necessarily feel any sense of obligation of loyalty to corporate employers.

Corporations like employees to believe that they have an obligation of loyalty to their employers because believing that serves the corporation’s interests.
Ladd’s Criticism of Employee Loyalty

- Ladd also believes that in the context of corporations, loyalty can only be in one direction.
- He argues that a corporation cannot be loyal to an employee in the same sense that employees are supposed to be loyal to it.
- A corporation's goals are competitively linked to the benefits employees bring to the corp.
- A corporation can be good to employees only because it is good for business, i.e., it is in the company's own self interest.