Computers and Society
ACM Code of Ethics

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6 Decisions of how to act are not confined to abstract debates.

6 Most professions have an ethical code.
   △ Medicine
   △ Biotechnology
   △ Law
   △ Public Policy/Government

6 Violations of ethical code can lead to professional censure.
Association for Computing Machinery
- Voluntary organization
- Conferences, research, networking, education

Like most professional organizations, the ACM would like to serve as a self-governing body.

A code of ethics is one component of this.
-2: Why have a Code of Ethics?

- Provide evidence that external monitoring is not needed
  - Enhance public trust
- Clarify responsibility to society
- Provide either a set of rules/prohibitions or a set of ideals
- Aid in decision making
General Moral Imperatives

- Contribute to society and general well-being
  - Protect human rights, respect diversity
  - Minimize negative consequences of computing systems
  - Ensure that products will be used in socially responsible ways
  - Consider environmental impact

- Are there controversial issues in here?
General Moral Imperatives

- Avoid harm to others
  - Loss of information, property damage
  - Harm to users, employees/employers, general public
  - Minimize malfunctions by testing thoroughly
  - Assess social consequences

How to balance these against each other?
General Moral Imperatives

- Be honest and trustworthy
- Be fair and take action not to discriminate
- Honor property rights including copyright and patent
- Give proper credit for IP
- Respect the Privacy of others
- Honor confidentiality

Can there be conflicts between these?
A section of the ACM code of ethics says that we should “not give unfair treatment to anyone because of irrelevant prejudices.” and “discrimination based on national origin is a violation of ACM policy and will not be tolerated.”

Suppose that you are a programmer who came to the US from Afghanistan 10 years ago. You need to hire six new employees. Because of the widespread poverty and destruction in your homeland, you have decided to hire only Afghans.

Is this ethically justifiable? Does it conflict with the ACM code?
Professional Responsibilities

- Strive to achieve highest quality, effectiveness and dignity
- Acquire and maintain professional competence
  - Education does not stop after graduation
- Know and respect existing laws
- Accept and provide professional review
- Give comprehensive evaluations of computer systems
- Honor contracts and agreements
- Access computing resources only when authorized
Organizational Leadership Imperatives

- Articulate and encourage responsibilities to team members
- Manage personnel and resources to enhance quality of working life
- Support proper use of the organization’s computing resources
- Ensure that systems are designed and validated to address user needs.
- Articulate and support policies that protect the dignity of affected users.
Compliance

- Uphold and promote the principles of the code
  - Should also encourage its adoption/adherence
- Treat violations as inconsistent with ACM membership
Jean is working on a database for a commercial company. She is behind schedule, and her boss wants her to be done in two days. One of her co-workers has access to the source for a competitor’s database from a previous job. Jean uses part of this code to finish her project, but doesn’t tell anyone.

What aspects of the ACM code has Jean violated?

What if Jean just looked at the code and wrote her own version?
-11: Case Study

- Giving proper credit for intellectual property
- Violating copyright
- Complying with existing laws
Bob is consulting on the design of a personnel database for a medium-sized company. He has involved the client in the process, working with the CEO, CIO, and personnel director. The system will store personal information, such as medical records, salaries, performance evaluations, etc.

The clients want to minimize cost, and ask for a less secure system. Bob is worried that this will not protect employee data adequately.

What should Bob do?
-13: Case Study

- Obligation to preserve data integrity
- Obligation to verify that systems are designed to protect personal privacy
- Obligation to assess needs of all affected by a system
- Obligation to educate company officials
- Obligation to contractual responsibilities
Case study

Jane is a QA engineer with a company that makes inventory software for shoe stores. The software manages accounting, shipping and ordering. Jane is concerned that their software has not been adequately tested, although they have done the contractually required tests.

Jane’s employers are pressuring her to sign off on the software; if it is late in shipping, the company could go out of business. If the company ships buggy software, their clients could be financially harmed.

What should Jane do?
Case study

- Avoid harm to others
- Professional integrity
- Be honest
- Commitments to employer
  - If Jane signs off, should she notify the client?
Brookwell Computing gets a contract with the US government to develop a new accounting system. It consists of report developments, internal processing, and a user interface.

The system meets the contract requirements, but the users find the user interface very difficult to work with. The government decides that they will not spend more money on our product, and go back to their old system.

How could the Code of Ethics help to avoid this problem?
-17: Case Study

6 Strive to achieve the highest quality
6 Harm - cost to taxpayers
6 Failure to follow a quality process
6 Implement a review process
6 Failure to consider all users of the system