Introduction to Computer Ethics

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Lecture objectives

- By the end of this lecture, students will be able to:
  - ✓Differentiate between ethics and computer ethics
  - ✓Discuss the various domains of ethics
  - ✓Identify ethical views for computer science professionals
  - ✓Explain the ethical issues in computing

What is ethics?

- Ethics are a set of moral principles that govern the behaviour of an individual, a group of people or a place.
  - Is involves morality as a rational examination into people's moral belief's and behavior
    - It is about what it means to do the right thing right.
- It centres around systematizing, defending, and recommending concepts of right and wrong behavior
  - The term is derived from the Greek word 'ethos' which can mean custom, habit, character or disposition.
- Ethics is about the rules that we follow in our interactions and our actions which affect others.


integrity
principles
moral
value
honesty
honor
ETHICS
right
choice
fairness
conscience
responsibility

Ethical domains

- Golden rules – treat others as you would want them to treat you.
- Deontological view – emphasizes duty and absolute rules whether it leads to good or ill consequences.
  - E.g. life is a struggle.
- Utilitarianism – focuses on increased happiness and what satisfies a person's needs and values.
  - E.g. stealing in order to help poor people
- Natural rights – emphasizes respect for a set of fundamental rights of others.
  - E.g. life and property rights.
- Negative rights – are rights that protect human freedom or liberty.
  - E.g. civil and political rights - freedom of speech, right to life, property, etc.

Ethical domains…

- Positive rights – emphasizes the obligation of some people to provide certain things for others.
  - E.g. help people in need
- Contributing to society – emphasizes that doing one's work honestly, responsibly, ethically, creatively, and well, is virtuous.
  - E.g. the need for charity
- Social contracts and theory of political justice – emphasizing people submitting willingly to a common law in order to live in a civil society.
  - E.g. copyrights, software infringement, etc.
- No simple answers – emphasizes that human behaviour and real human situations are complex
  - Ethical theories have to identify important principles or guidelines.

Ethics in Society

- Ethics in society is centred around:
  - ➢ Morality – the rules of conduct describing what people ought and ought not to do
  - ➢ Legality – relationship is concerned with law in its broadest sense e.g. compliance, litigation, evidence, etc.
- Core components in "doing" ethics include:
  - ✓ Identifying social/ethical issues
  - ✓ Entering into serious discourse about the possibilities
  - ✓ Taking actions.

Definition of computer ethics

- Computer ethics is the set of moral principles for formulation and justification of policies for the ethical use of computers and other related information and communication technologies.
  - It is a branch of applied ethics and practical philosophy which analyzes social and ethical impacts of information technology.
  - It is also referred to as the standard of professional practice, codes of conduct, aspects of computer law, public policy, corporate ethics, and sociology and psychology of computing.
- Computer ethics involves ethical questions that arise as a consequence of the development of information and communication technologies.

Definition of Computer Ethics…

Computer ethics is a field concerned with "policy vacuums" and "conceptual muddles" regarding the social and ethical use of information technology

James Moor

Policy vacuum – Computers provide us with new capabilities and these in turn give us new choices for action

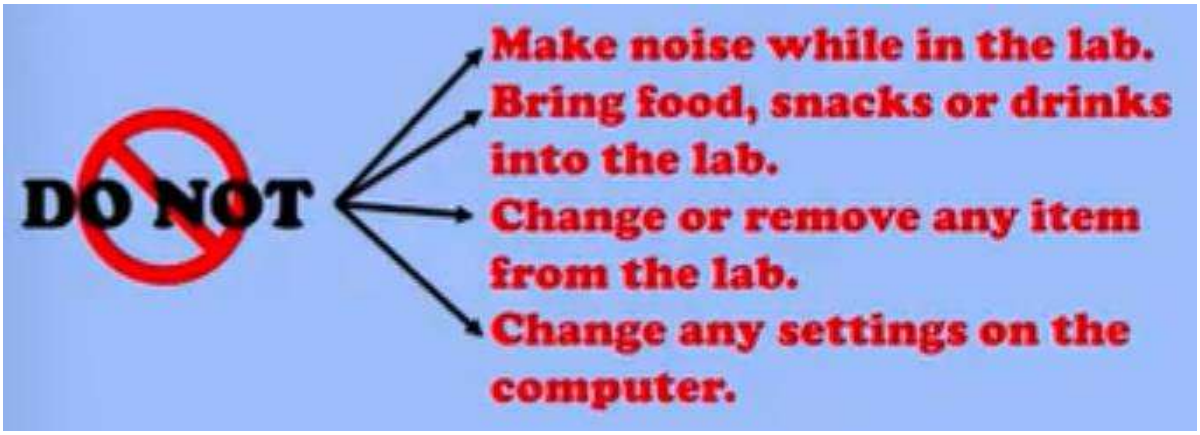
Conceptual muddle - a problem in computer ethics may seem clear initially, a little reflection reveals a conceptual muddle

Definition of computer ethics…

- Computer ethics is a part of practical philosophy concerned with how computing professionals should make decisions regarding professional and social conduct.
  - Computer ethics assumes that people are rational and make the right choices.
- Two most common issues related to computer ethics are:
  - Intellectual property rights
  - Privacy rights

Computer ethics – computer lab. example

- In a computer laboratory, there are DOs and DON'Ts that must be obeyed.
  - ➢These are called rules and regulations, or ethics



Computer ethics – computer lab. example...

Ethics and computer professionals

- A computer science professional and/or educationist determines ethical course of action from mainly three different perspectives:
    i. Deontological approach – giving someone rights creates obligations.
    ii. Social contract approach – negotiation and consensus as tools
    iii. Utilitarian approach – thinking of the "greater good of society."

Universal Ethical norms for computer professionals

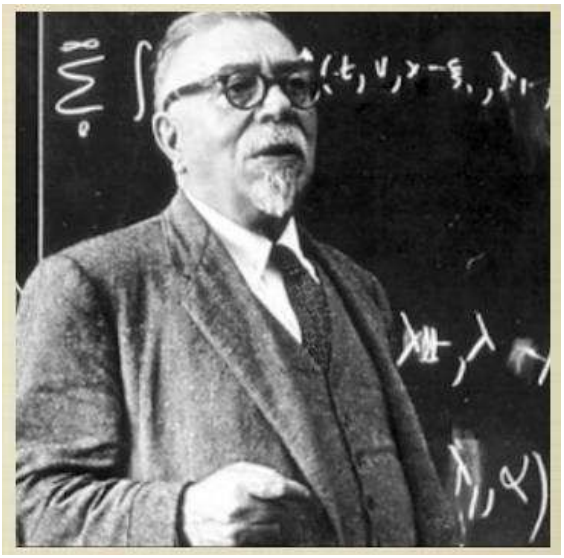
- Personal integrity – observe quality of being honest and having strong moral principles.
  - Also referred to as claim of competence
- Responsibility to employer and client – you have the obligation to your employer or client.
- Responsibility to the profession – you are an ambassador of the computer profession.
- Confidentiality of information – observe secrecy of all data, information, and security details you get access to.

Universal Ethical norms for computer professionals…

- Conflict of interest – do not derive personal benefit from actions or decisions made in your professional capacity.
- Dignity of people – observe the worth of respect and right of each person interacted with and treat them ethically.
- Public safety, health and welfare – care for the wellbeing and physical conditions of the people interacted with.
- Participation in professional societies – get involved and contribute to related professional societies.
- Increasing public knowledge about technology – contribute to furthering, and increasing computer science technical knowledge in the society.

History of Computer Ethics

- MIT **professor Norbert Wiener** in the early 1940s in a writing about the second industrial revolution predicted that "*the integration of computer technology into society will eventually constitute the remaking of society*"
- In 1973, the Association for Computing Machinery (ACM) adopted its first code of ethics.



Prof. Norbert Wiener

Origin of Computer Ethics

- In 1976, medical teacher and researcher **Walter Maner** noticed a need for a different branch of ethics for when it came to dealing with computers.
  - He noticed that ethical decisions are much harder to make when computers are added.
    - He invented the term "computer ethics"
- In 1976 **Joseph Weizenbaum** added how artificial intelligence is good for the world.
- During 1978, the Right to Financial Privacy Act was adopted by the **United States Congress**, drastically limiting the government's ability to search bank records.

Origin of Computer Ethics

- In Mid 1980's, **James Moor** published influential article "*What Is Computer Ethics?*"
  - ➢This was followed by **Deborah Johnson** who published the first textbook, entitled *Computer Ethics.*
- During the 1990s, new **university courses**, research centres, conferences, journals, articles and textbooks appeared, and a wide diversity of additional scholars and topics became involved.
- Mid-1990s saw the second generation of Computer Ethics.
  - ➢Including building elaborate conceptual foundation, in parallel with developing the frameworks within which practical actions can occur.

New Twist from Old Ethical Issues

- Computer ethics is growing and changing as computers are grow and change too.
- Thus, emergence of two views on computer ethical issues:
  - Narrow view – apply traditional ethics based on conventional norms to issues regarding the use of computer technology
  - Broad view – include standards of professional practice, codes of conduct, aspects of computer law, public policy, corporate ethics

New Twist from Old Ethical Issues…

"ethical problems aggravated, transformed or created by computer technology pose new versions of standard moral problems and moral dilemmas, exacerbating the old problems, and forcing us to apply ordinary moral norms in uncharted realms"

Maner & Johnson

Common issues involving ethics

- The common issues include the following. In groups of not more than six members each, discuss and explain the three:

- **Group one:**
  - ✓Intellectual property
  - ✓Digital rights management
  - ✓Privacy
- **Group two:**
  - ✓Control and access
  - ✓Censorship
  - ✓Computer crime
- **Group three:**
  - ✓Artificial intelligence
  - ✓Law and ethics
  - ✓Netiquette

Thank you