PROFESSIONAL ETHICS

(LECTURE SLIDES WEEK # 2)

HUMANS VS OTHER CREATION

- Faculties which distinguish Humans from Other Beings:

    - **A moral Being:** understanding of Good or Bad, right and wrong,

        (امر بالمعروف و نہی عن المنکر) (Ma`roof) and (Munkar)

    - **A logical being:** Endowed with Wist, عقل., Samajh, Aqal and Feham. Being able to understand, appreciate and develop logical argument.

    - **An Esthetical being:** Endowed with Esthetical Sense, ، جمال یا جمالیات سے مُتَعلق Having understanding beauty and appreciation of beautiful ذوق جمال رکھنے والا things

SOURCES OF KNOWLEDGE

- **Knowledge bout or from Allah's Creation**
    - **Observation** (external as well as internal), experimentation through our Five Senses, repetition to improve the results

    - **Logical Being**: logic is the basis of our ability to think, analyze, infer, argue, and communicate. Indeed, logic goes to the very core of what we mean by human intelligence, Inference, logical reasoning, Deductive reasoning, Inductive Logic, Syllogism

    - **Established History:** Known events/facts, Published proven knowledge

- **Quran:** The directly transmitted Word of Allah is the fourth source of knowledge

KNOWLEDGE VS. GOODNESS

"Goodness without Knowledge is weak. Knowledge without Goodness is Dangerous."

Paul Tillich

VALUES

- **Values** are the motive behind purposeful action. They are the ends to which we act and come in many forms. Personal **values** are personal beliefs about right and wrong and may or may not be considered moral. Cultural **values** are **values** accepted by religions or societies and reflect what is important in each context.

PROFESSIONAL ETHICS

- **What is Ethics?**
  - Ethics is concerned with human conduct, i.e., behavior of individuals in society
  - Ethics can be defined broadly as a set of moral principles or values
  - The systematic study of rightness and wrongness of human conduct
  - Derived from the Greek word *eché* which means character
  - Ethics is a collection of heuristics that, when followed, improves our way of life. E.g. always tell the truth
- **Why Ethics Important?**
  - Happy Life ← Conditions that create happiness
  - Each society establishes rules and limits on acceptable behaviour, these rules form a moral code
  - Sometimes the rules conflict. In general they are beliefs or conventions on good and evil, good or bad conduct, justice and injustice
  - The rules sometimes do not cover new situations
- **Aakhirah**

PROFESSIONAL ETHICS

- **Professional ethics** are principles that govern the behaviour of a person or group in a business environment.

- Like values, **professional ethics** provide rules on how a person should act towards other people and institutions in such an environment.

- **Professional ethics** encompass the personal and corporate standards of behaviour expected by professionals.

PROFESSIONAL ETHICS

- **Ethical Principles:**
  - Beneficence – active goodness, kindness
  - Non-maleficence – preventing harm
  - Autonomy – right of self-governance
  - Veracity – habitual truthfulness
  - Fidelity – loyalty, faithfulness, allegiance
  - Justice – fairness, impartiality, equity
  - Privacy – ability of an individual or group to seclude themselves

  - Tolerance/Patience
  - Social justice. ...
  - Procedural justice.
  - Confidentiality
  - Duty
  - Paternalism
  - Retardation
  - Gratitude

- *Remember!!*
  - Knowing what is right, does not mean much unless you DO what is right!!

PROFESSIONAL ETHICS

- **Why People Act Unethically?**
  - The person's ethical standards are different from those of society as a whole
  - The person chooses to act selfishly
    - *Person A* finds a briefcase containing important papers and $1,00,000. He tosses the briefcase and keeps the money. He brags to his friends about his good fortune
    - This action probably differs from most of society
- In many instances, both reasons exist
- Most people who commit such acts feel no remorse when they are apprehended because their ethical standards differ from those of society as a whole

PROFESSIONAL ETHICS

- **Different Views about Ethics:**
  - Ethics vs. Feelings
    - Feelings frequently deviate from what is ethical
  - Ethics vs. Religion
    - Ethics cannot be confined to religion nor is it the same as religion
  - Ethics vs. Law
    - Laws, like feelings, can deviate from what is ethical
    - Objection to Fighting
    - Capital Punishment
  - Ethics vs. "Whatever Society Accepts"
    - Standards of behavior in society can deviate from what is ethical
    - An entire society can become ethically corrupt
    - E.g. Pirated CDs
  - Ethics vs. Morality:
    - Ethics is study of morality
    - Morality is a system of rules for guiding human conduct, and principles for evaluating those rules

PROFESSIONAL ETHICS

- **Comparison: Ethics, Law, Morals**
  - Ethics:
    - Group application, control within group, enabled by a code, punished by expulsion
  - Law:
    - Political subdivision controlled outside the group, by way of legislation, punished by fines, prison
  - Morals:
    - Applied by individuals, controlled by conscience, enabled by religious or cultural standards, punished by shame or guilt

PROFESSIONAL ETHICS

- ## **Professional Ethics:**
    - Publicly displayed ethical conduct of a profession, embedded in a code of ethics.
    - The principles and standards that guide members of the profession in their interactions with internal and external stakeholders.

- ## **Why Professional Ethics?**
    - Awareness of professional ethics is gaining importance with time as the decision-making process in the workplace keeps on increasing in complexity
    - The professional ethics provide a way of simplifying that decision-making process

PROFESSIONAL ETHICS

- **What do Professional Ethics Provide?**
  - Adds a level of professionalism
  - Defines and promotes a standard when dealing with clients and employers
  - Protects the profession as a group
  - Classifies the rights of members, clients, and employers
  - Provides a guideline in questionable areas

- **Problems with Professional Ethics:**
  - Can not cover all aspects
  - Who determines violations?
  - How are the rules interpreted?
  - What penalties exist for violations?

PROFESSIONAL ETHICS

- **Professional Ethics must take into account:**

    - Relations between professionals and clients

    - Relation between profession and society

    - Relations among professionals

    - Relations between employee and employer

    - Specialized technical details of the profession

- **A computing professional must understand:**

    - Cultural, social, legal, and ethical issues in computing

    - Responsibility and possible consequences of failure

PROFESSIONAL ETHICS

- **Why Special Need for Ethical Conduct in Professions?**
    - Society has attached a special meaning to the term professional.
    - A professional is expected to conduct himself or herself at a higher level than most other members of society.
    - Organizations have to bear the responsibility of actions of professionals; thus organizations must be concerned about professional ethics.

- **Principles vs. Code of Conduct:**
    - **Principles:** Ideal standards of ethical conduct in philosophical terms. They are not enforceable.
    - **Code of Conduct:** Minimum standards of ethical conduct stated as specific rules. They are enforceable.

PROFESSIONAL ETHICS

- **Computer Ethics:**
  - A branch of practical philosophy which deals with how computing professionals should make decisions regarding professional and social conduct.
  - Analysis of the natural and social impact of computer technology and the corresponding formulation and justification of policies for the ethical use of such technology. [James H. Moore]
  - Ethical Problems arise because of Conflicting Interests
    - Music Downloader vs. Music Rights Owner
    - Spammers vs. Email Users
  - As Computer Crimes and our Reliance and Dependence on Computers and ICT increases, We are becoming more and more susceptible and exposed to cyberspace evils and insecurity.
  - Avalanche of Cyber Vandalism
  - Computer Ethics vs. Other Fields:
    - Theft is theft no matter whether it is done at the point of a gun or with a computer.

PROFESSIONAL ETHICS

- **Why Computer Ethics?**
  - To determine what should be done in ethical situations while being part of computing profession
  - Walter Maner Justifications:
    - To make us behave like responsible professionals
    - To teach us how to avoid computer abuse and catastrophes
    - Technological advancements creating temporary policy vacuums
    - Use of computing permanently transforms certain ethical issues to the degree that their alterations require independent study
    - Use of computing technology creates, and will continue to create, novel ethical issues that require special study (e.g., AI bias, deepfakes).
    - Set of novel and transformed issues is large enough and coherent enough to define a new field.
  - Walter Maner coined the term 'computer ethics'

PROFESSIONAL ETHICS

- **Categories of Computer Ethical Issues:**
  - **Privacy**
    - Computers create a false sense of security
    - People do not realize how vulnerable information stored on computers is
  - **Property**
    - Physical property
    - Intellectual property (in both copyright and patent)
    - Data as property
  - **Access**
    - Access to computing technology
    - Access to data
  - **Accuracy**
    - Accuracy of information stored

PROFESSIONAL ETHICS

- **<u>Ten Commandments of Computer Ethics*:</u>**

1. You shall not use a computer to harm other people
2. You shall not interfere with other people's computer work
3. You shall not snoop around in other people's computer files
4. You shall not use a computer to steal
5. You shall not use a computer to bear false witness
6. You shall not copy or use proprietary software for which you have not paid
7. You shall not use other people's computer resources without authorization or proper compensation
8. You shall not appropriate other people's intellectual output
9. You shall think about the social consequences of the program you are writing or the system you are designing
10. You shall always use a computer in ways that show consideration and respect for your fellow humans
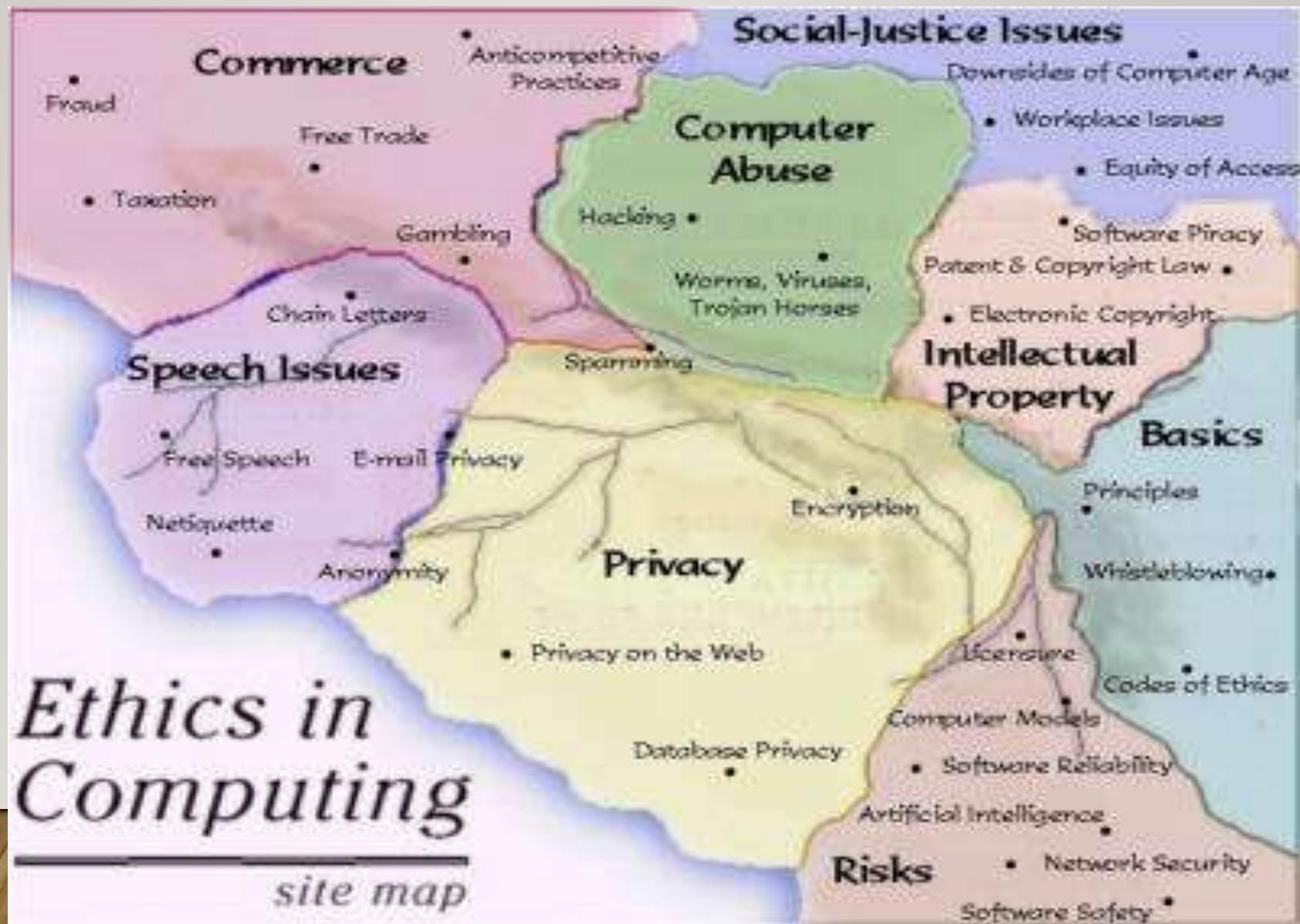
*Created in 1992 by Computer Ethics Institute

PROFESSIONAL ETHICS

- **Codes of Ethics for Computer Professionals:**
  - Central concern: the public good, including human rights and diversity of culture
  - Honesty and fairness in communication about software and related topics
  - Use client or employer property only as authorized
  - High quality, reasonable cost and schedule
  - Respect for privacy, intellectual property
  - Disclose conflicts of interest
  - Address software errors
  - Lifelong learning
  - Honor agreements and assigned responsibilities

ETHICS IN COMPUTING
HTTPS://ETHICS.CSC.NCSU.EDU/

ETHICAL SCENARIOS

- **Scenario 1 – *Illegal Use***
  - A person is using a piece of SW without the author's permission and says: "I'm not really using it, I'm just evaluating it before I make a firm decision on buying"
  - That person is "evaluating" that piece of SW for 12 months now!
  - **Is the conduct of that person ethical?**

ETHICAL SCENARIOS

- **Scenario 2 – *Vaporware***
  - A small company announces a new SW product
  - A larger, more established competitor hears about that product, and starts a whispering campaign that she is also working on a similar product that will be released soon.
  - Potential customers decide to wait for the product instead of making the more riskier purchase from the smaller company.
  - The new company's sales become sluggish, and it fails to earn back the investment that it has put into developing that new product. That results in her closure.
  - The larger company never releases the promised product.
  - **Is the conduct of that large company unethical or a reasonable business tactic?**

ETHICAL SCENARIOS

- **Scenario 3 – *Whistle Blower***
  - SW bugs, at times, have catastrophic consequences
  - While Bhola sahib was working for a contractor at NASA, he found such a bug and reported it to his boss, Murphy sahib, who ordered him to never mention it to any one, or he will get fired
  - Bhola sahib got scared, and did as he was told
  - **Did Bhola sahib behave in an ethical manner? Would you hire him in your company?**
    - Truth (Disclosure) vs. Loyalty (Confidentiality)

ETHICAL SCENARIOS

- **Scenario 4 – *Trade Secrets***
  - Bhola sahib was working at HoliSoft
  - He leaves it to work for a competitor, SuperSoft
  - Even before starting at SuperSoft, he already has divulged many of the trade secrets of HoliSoft during his interviews at SuperSoft, giving them an advantage over HoliSoft
  - **Do you agree with Bhola Sahib's ethics? Would you hire him in your company?**

ETHICAL SCENARIOS

- ## Scenario 5

  - You are asked to develop software that stores and manages customers financial data.

  - You find a security flaw days before its delivery to the client.

  - Your boss tells you to sit on it and will be fixed with a patch after the delivery.

  - If you bring the flaw to the foreground it will delay the release and cost your company millions.

  - **What do you do?**

ETHICAL SCENARIOS

- **Scenario 6**
  - You work for a small software firm that is contracted to write a program that can predict the spread of radiation of a dirty bomb with 75% accuracy.
  - The best you have been able to achieve is 74.6% accuracy.
  - You boss says close enough and rounds up the test data.
  - **What will you do?**

ETHICAL SCENARIOS

- **Scenario 7**
  - You worked for a software firm developing countless programs for many years.
  - Over those years you have made several software libraries that help you do your job.
  - You decided to move on to a new company.
  - After a few weeks you realize that you can use the libraries from your old job to help with your new job.
  - **What do you do?**

ETHICAL DECISION MAKING

- **Factors for consideration:**

  - Who is affected? What are their rights?

  - What are risks or issues?

  - What are benefits?

  - What actions are possible?

  - What are responsibilities of actors?

  - What are ethically acceptable choices?