# Week 2 Topic: Professional Ethics & Code of Ethics

❑ Introduction

❑ IEEE Code of Ethics

❑ ACM Code of Ethics

❑ Different Scenarios

❑ Cyber Ethics

# Introduction

❑ **Law:**

Rules that mandate or prohibit certain behavior in society.

❑ **Moral Values:**

The fixed moral attitudes or customs of a particular group

❑ **Ethics:**

Define socially acceptable behaviors.

# Code of Ethics

❑ Established by various professional organizations

- ▪ Produce a positive effect on judgment.

- ▪ Establishes responsibility of professionals to act ethically according to the policies and procedures of their employers, professional organizations, and laws of society.

- ▪ Organizations assume responsibility to develop, disseminate, and enforce policies.

# Code of Ethics' Goals

Provides an aid to individual decision making, presentation addresses nine different cases (with some overlap).

- ❑ Intellectual property
- ❑ Privacy
- ❑ Confidentiality
- ❑ Professional quality
- ❑ Fairness or discrimination
- ❑ Liability
- ❑ Software risks
- ❑ Conflicts of interest
- ❑ Unauthorized access to computer systems

# IEEE Code of Ethics

❑ IEEE Code of Ethics: Actions

1. PUBLIC - Software engineers shall act consistently with the public interest.

2. CLIENT AND EMPLOYER - Software engineers shall act in a manner that is in the best interests of their client and employer consistent with the public interest.

❑ IEEE Code of Ethics: Products

3. PRODUCT - Software engineers shall ensure that their products and related modifications meet the highest professional standards.

# Continued…

❑ IEEE Code of Ethics: Hierarchy

4. JUDGMENT - Software engineers shall maintain integrity and independence in their professional judgment.

5. MANAGEMENT - Software engineering managers and leaders shall subscribe to and promote an ethical approach to the management of software development and maintenance.

❑ IEEE Code of Ethics: Peers

6. PROFESSION - Software engineers shall advance the integrity and reputation of the profession consistent with the public interest.

# Continued…

7. COLLEAGUES - Software engineers shall be fair to and supportive of their colleagues.

❑ IEEE Code of Ethics: Self

8. SELF - Software engineers shall participate in lifelong learning regarding the practice of their profession and shall promote an ethical approach to the practice of the profession.

# Principles of IEEE Code of Ethics

❑ Act in public interest

❑ Act in interest of clients and employers

❑ Produce quality products

❑ Maintain independent judgment

❑ Manage ethically

❑ Protect integrity of profession

❑ Support colleagues

❑ Pursue lifelong learning

# ACM Code of Ethics

<u>General moral imperatives</u>: "As an ACM member I will…"

❑ 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 rights including copyrights and patents.

❑ Give proper credit for intellectual property.

❑ Respect the privacy of others.

❑ Honor confidentiality.

Specific professional responsibilities: "As an ACM computing professional I will":

- Strive to achieve the highest quality, effectiveness and dignity in both the process and products of professional work.

- Acquire and maintain professional competence.

- Know and respect existing laws pertaining to professional work.

- Accept and provide appropriate professional review.

- Give comprehensive and thorough evaluations of computer system and their impacts, including analysis of possible risks.

- Honor contracts, agreements, and assigned responsibilities.

- Improve public understanding of computing and its consequences.

- Access computing and communication resources only when authorized to do so.

<u>Organization leadership imperatives</u>: "As an ACM member and an organizational leader, I will:"

❏ Articulate social responsibilities of members of an organizational unit and encourage full acceptance of those responsibilities.

❏ Manage personnel and resources to design and build information systems that enhance the quality of working life.

❏ Acknowledge and support proper and authorized uses of an organization's computing and communication resources.

❏ Ensure that users and those who will be affected by a design have their needs clearly articulated during the assessment and design of requirements; later the system must be validated to meet requirements.

❏ Articulate and support policies that protect the dignity of users and others affected by a computing system.

❏ Create opportunities for members of the organization to learn the principles and limitations of computer systems.

Compliance with the Code: "As an ACM member, I will:"

❑ Uphold and promote the principles of this Code.

❑ Treat violations of this code as inconsistent with membership in the ACM.

# Ethical decision making: Case 1

❑ **Ali is a database programmer**

    Large statistical program needed by his company.

    Company programmers are encouraged to publicize their work

❑ **Ali has found himself stuck on a problem**

    He has persisted at this for several months.

    His manager does not recognize complexity of problem.

    She insists job be completed in the few days.

❑ **Ali remembers:**

    Co-worker had given him source listings of their current work.

    He also has an early version of commercial software developed at another company

❑ Ali studies these programs

Sees two areas of code which could be directly
incorporated into his own program

He uses segments of code both from his coworker and
from the commercial software

❑ He does not tell anyone or mention it in the documentation.

❑ He completes the project and turns it in a day ahead of time.

❑ How does the Code of Ethics help us understand this case?

# Applying the code: Case 1

❑ This case highlights issues involving intellectual property

❑ Ali violated professional ethics in two areas:

    1. Failure to give credit for another's work

    2. Using code from a commercial package that was copyrighted

❑ If Ali only "looked" at co-worker's source code:

    Could he then write his own program and still have an obligation to give credit?

❑ Yes: He should have acknowledged credit in documentation.

# Continued…

❑ Use of commercial software code was also not appropriate:

    Ali should have checked to determine whether or not company was authorized to use source code before using it.

❑ In general:

    Desirable to share and exchange intellectual materials

    But using software is definitely a violation of code.

# Ethical decision making: Case 2

❑ Aisha's company has been hired by a client to build a security system. Because of cost overruns, client has decided to opt for a less secure system.

❑ Aisha believes information they will store is extremely sensitive.

❑ With weak security:

Employees on workstations could figure out how to access this data.

Online intruders would also have access

❑ Aisha feels strongly that system should be much more secure.

❑ She has tried to explain the risk.

❑ What should Aisha so? Should she refuse to build the system as they request?

# Applying the Code: Case 2

❑ **This case highlights issues involving privacy.**

❑ **Company officials:**

Have an obligation to protect privacy of their employees. Therefore they should not accept inadequate security.

❑ **Aisha's first obligation:**

Attempt to educate company officials

If that fails, she needs to consider her contractual obligations in honoring assigned responsibilities.

❑ We don't have Aisha's contract, but she may have to choose between her contract and her obligation to honor privacy and security.

# Ethical decision making: Case 3

❑ A contractor is determining requirements for an employment agency.

❑ Client describes what is needed when displaying applications whose qualifications appear to match those for a particular job

❑ Client also further states that names of white applicants are to be displayed ahead of nonwhites

❑ Further states that names of male applicants are to be displayed ahead of female applicants