**Week 1 Topic: The Profession**

* Introduction
* Professionalism
* Traits of a Professional
* Applying Professionalism in Daily Life

Introduction

Profession: A paid occupation, especially one that involves prolonged training and a formal qualification.

Professional: A professional is a member of a profession or any person who earns their living from a specified professional activity. The term also describes the standards of education and training that prepare members of the profession with the particular knowledge and skills necessary to perform their specific role within that profession.

Professional Responsibilities

With reference to Information Technology, Computer Science or Software Engineering, the responsibilities of working professionals in this area include network administration, software development and installation, and the planning and management of an organization's technology life cycle, by

which hardware and software is maintained, upgraded and

replaced.

But these are not ENOUGH.

*Engineering Council states that other than professional Knowledge, an Engineer must* *know*

Technical decision making and its commercial and economic implementation; ... knowledge of government legislation affecting work, e.g. safety, health, environmental requirements; an understanding of the principles of management and industrial relations; some knowledge of trade unions and their

organization; an understanding of the engineer's responsibility for to the profession, to the community and to the environment

The Professionalism

A profession isn't just what you do, it's who you are.

Professionalism is a way of thinking and living rather than an accumulation of learning.

Traits of a Profession

Four Traits of Profession

1. Varied activities requiring special skills

2. Society-centric motivation

3. Personal standards of excellence

4. Giving back to society

A professional behaves ethically

Ethics means something more than ‘law' and ‘morals'.

It carries an additional connotation of ‘rightness'.

· Breaking the law: can earn a fine or jail time

· Breaking a moral: can ruin your reputation

. Breaking an ethic: can ruin your conscience It's possible to break all three, simultaneously!

Traits of a Professional

Being a professional means that they are certain traits which are expected from you.

We will go through Each of them

Trait # 1 of a professional: Seriousness

Serious about job

The job is only a job. A means to an end

Trait # 2 of a professional: Wanting to do better

Exhibit a never-ending quest to improve their performance in every variable, every project, every relationship, and every

detail.

Trait # 3 of a professional: Dealing with the Unexpected

Stuff happens, things change, and the true professional rises to

the occasion

Trait # 4 of a professional: Communication Skills

Clear

Concise

Confident

Trait # 5 of a professional: Enthusiasm

Attitude is everything. Those who exhibit enthusiasm for what they do and greet each day with a positive attitude inevitably become a leader

Trait # 6 of a professional: Helpfulness

Understand that real success in the workplace requires teamwork

Always ready to lend a hand

Make a suggestion

Offer a compliment when it's deserved

Trait # 7 of a professional: Taking the

Initiative

Takes the initiative to get things done

Trait # 9 of a professional: Remains Focused

Stay focused on the task at hand and the goal ahead

Navigate through obstacles or setbacks but never lose sight of where they headed

Trait # 10 of a professional: Don't Follow,

Lead

True Professionals aren't faint of heart

Analyze the situation and willing to take new paths and try new

solutions

That's why they call it LEADERSHIP:

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Applying Professionalism in Real Life

Scenario #1

You are the owner of a software engineering company. Your employees (engineers) want you to pay for them to attend

training.

How would you respond in a way that is legal, moral, and

ethical?

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Scenario #2

You are the owner of a software engineering company. Your employees (engineers) want you to let them do pro bono work for a local non-profit organization on company time.

How would you respond in a way that is legal, moral, and

ethical:

Scenario #3

You are a software engineer at a company where management routinely encourages you and your colleagues to use pirated

software.

How would you respond in a way that is legal, moral, and

ethical?

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**Week 2 Topic: Professional Ethics & Code of Ethics**

* Introduction
* IEEE Code of Ethics
* ACM Code of Ethics
* Different scenarios
* Cyber 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 security.

Organization assumes

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

PRODUCT - Software engineers shall ensure that their products and related modifications meet the highest professional standardsge 6

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 UPROFESSION - Software engineers shall advance the integrity and reputation of the profession consistent with the public intereste 7

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.

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ACM Code of Ethics

General moral imperatives: “As an ACMmember 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.

o Honor confidentiality.

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computing

Specific professional responsibilities: “As an ACM 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.

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ss computing and communication resources only when authorized to do so.

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Organization leadership imperatives: “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. d hreate opportunities for members of the organization to learn the principles and limitations of computer systems.

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Ethical decision making: Case 1

**O 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

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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 Jobligation to give credit? mies: He should have acknowledged credit in documentation.

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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.

O With weak security:

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

Online intruders would also have access

**O 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

Page 18 request?

Week 3

Organisation

 impossible to live in a civilized  society without close contact with many large organisations

 Like  School University public utility government and local government department the health service commercial and industrial companies and so on

 in many ways these organisation resemble each other

 Legal form of organisation

 Law recognises individuals

Enter into contract

 tried for crimes

Sued

 act of parliament  impose duties on the individual e.t.c