# Investigating Ethical issues

- **Objectives**
- The objective of this class is to introduce current and prospective I.T. professionals to a procedure for analyzing ethical issues in your workplace.
- When you have completed this class, you will be able to:
  - Apply a procedure to systematically analyze an ethical issue,
  - Conduct a dialectic to explore an ethical issue and reason about it,

# Dialectic

- **Premise 1:** We want to create attitudes, conventions, rules, and laws that encourage the development and use of I.T. for the good of us all. We do not want I.T. to serve the interests of a few, degrade our environment, etc.
- **Premise 2:** In discussing computer ethical issues, we want to give reasons for our intuition and moral beliefs so arguments can be analyzed.
  - A **dialectic (a dialogue from intuition per case, to** argument based on principle, to theory) may not always lead to a definitive conclusion or a unanimous agreement, but it should increase knowledge and understanding.

# Investigating Ethics

- First we examine traditional ethical theories, concepts and analytic techniques. These establish a common vocabulary and framework which we can use to articulate moral ideas.

# Investigative Procedure - Crime

- Remember your favorite police shows, detective stories, thrillers and mystery books? Underneath the myriad plots is a fairly standard investigative procedure used by policing authorities to solve crimes generally:

1. recognize a crime may have occurred in a given situation
   - secure the crime scene
   - •collect evidence
2. identify the victim(s), suspects, witnesses, bystanders
   - collect statements
   - locate any party who departed the scene
3. explain the facts of what happened
4. formulate alternative hypotheses (theories) include motive and means for each possible perpetrator
5. eliminate suspects and hypotheses
   - charge most likely perpetrator(s)

# Investigative Procedure - Ethics

- **Procedure to analyze an ethical issue:**

1. recognize an ethical issue may exist in a given situation
   - quarantine situation while under investigation
   - collect evidence, eg. normative claims

2. identify the participants, stakeholders, victims,ie. identify the players or parties
   - collect statements, documents
   - notify any relevant external parties

3) explain the ethical problem faced by the players, ie. define the moral dilemma

4) formulate alternative solutions to the ethical problem, ie. list the options
   - clarify the principles, values, outcomes underlying each solution

5) priorities the alternative solutions in terms of their values and outcomes, ie. state your preferred solution to the ethical problem.
   - give a short rationale for your decision
   - generalize where possible

# EXAMPLE1

- Jean, a statistical database programmer, is trying to write a large statistical program needed by her company. Programmers in this company are encouraged to write about their work and to publish their algorithms in professional journals. After months of tedious programming, Jean has found herself stuck on several parts of the program. Her manager, not recognising the complexity of the problem, wants the job completed within the next few days. Not knowing how to solve the problems, Jean remembers that a co-worker had given her source listings from his current work and from an early version of a commercial software package developed at another company. On studying these programs, she sees two areas of code which could be directly incorporated into her own program. She uses segments of code from both her co-worker and the commercial software, but does not tell anyone or mention it in the documentation. She completes the project and turns it in a day ahead of time.

# EXAMPLE2

- A software development company has just produced a new software package that incorporates the new tax laws and figures taxes for both individuals and small businesses. The president of the company knows that the program has a number of bugs. He also believes the first firm to put this kind of software on the market is likely to capture the largest market share. The company widely advertises the program.
- When the company actually ships a CD, it includes a disclaimer of responsibility for errors resulting from the use of the program. The company expects it will receive a number of complaints, queries, and suggestions for modification. The company plans to use these to make changes and eventually issue updated, improved, and debugged versions. The president argues that this is general industry policy and that anyone who buys version 1.0 of a program knows this and will take proper precautions. Because of bugs, a number of users filed incorrect tax returns and were penalised by the KRA

# Philosophical Ethics

- **Objectives**
- The objective of this class is to introduce current and prospective I.T. professionals to three (3) major ethical theories: relativism, utilitarianism and deontology.
  - We cannot possibly do justice to over two thousand years of intellectual effort behind these theories. But we can expand the ethical procedure introduced in earlier to include the reasoning power of an ethical theory when it can support a dialectic.
- When you have completed this class, you will be able to:
  - Explain 3 ethical theories: relativism, utilitarianism and deontology,
  - Apply a procedure to systematically analyze an ethical issue with the support of an ethical theory

# Relativism

- Is what is right for me necessarily right for you? Is ethics relative …to the individual or society?
- **Relativism can be formulated as :**

a) There are no universal rights and wrongs, and

b) right and wrong are relative to one's society.

# Relativism

- Descriptive facts cited as supporting relativism

1) What is considered right and wrong varies between cultures. Eg. Wife inheritance, gay
2) What is considered right/wrong at one time in a society may change. Eg. slavery.
3) The morals we are taught depend on our religion / environment.

# Utilitarianism

- …is a form of consequentialism which evaluates behavior in terms of consequences.
- Utility principle: *Everyone ought to act so as to bring about the greatest amount of happiness for the greatest number of people.*

  (Cf. **Egoism: *You ought to act so as to bring*** *about the most good consequences for yourself)*
- Argument in support of utilitarianism:
  - Happiness is the ultimate intrinsic good =>
  - Morality must be based on creating as much of this good as possible =>
  - The right action is the one that produces the most overall net happiness (good minus bad).

# Analysis of Utilitarianism

- According to utilitarianism, no one person's un/happiness is more important than another's.
- Since great overall happiness may result from sacrificing the happiness of a few, utilitarianism appears to justify imposing enormous burdens on some individuals for the sake of others.

# Deontology

- **Deontology = duty science (in Greek etymology)**
- …an ethical theory that states "at least some acts are morally obligatory regardless of their consequences for human welfare".
- What makes an action right or wrong? For utilitarians, it is the consequences. For deontologists, it is the **principle behind the act.**

# Deontology

- Eg. It is not morally worthy to tell the truth because a reward is expected, or punishment for lying is feared. It is right to tell the truth because
- I accept I must respect the other person.
- Argument in support of deontology:
  - If happiness is the highest good, blind instinct would suit us better than our unique rationality which lets us reason, decide & act.
  - Animals cannot be moral beings because they lack the rationality that allows us to be moral.
  - We must not deny a person's rationality.
- Hence the categorical imperative (C.I.) :

  *Never treat another person merely as a means; always respect individuals as ends in themselves.*

# Exercise two

1. Is ethical relativism un/convincing, in/credible, im/plausible ?
2. Why can't happiness be the highest good for humans, according to deontologists ?

# Professional Ethics

- **Objectives**
- The objective of this class is to introduce current and prospective I.T. professionals to :
  - The main employment relationships and their implications for professionals,
  - what behavior is expected of professionals, and
  - the application of professional codes of conduct.
- When you have read this chapter, you will be able to:
  - distinguish the main employment relationships, explain the major obligations of employers (principals) and employees (contractors),
  - appreciate the privileges and responsibilities of professionals, and
  - apply professional ethics in appropriate workplace situations.

# Professional Ethics

- Define a profession
- Define a proffesional
- Actions of I.T. workers can be analyzed with ethical theory. But acts need not simply result from issues of individual choice. We must also consider "acting in a professional capacity".
- Professionals acquire skills which give them special powers (efficacy) to affect the world.
- Professionals acquire special rights and responsibilities. Some of these are exceptions to ordinary morality (ie. privileges and duties).

  *Cf. doctors, lawyers, priests, police.*

# WHAT IS A PROFESSION?

- Computing professionals include hardware designers, software engineers, database administrators, system analysts, and computer scientists.
- In what ways do these occupations resemble recognized professions such as medicine, law, engineering, counseling, and accounting?
- In what ways do computing professions resemble occupations that are not thought of traditionally as professions, such as plumbers, fashion models, and sales clerks?

# Characteristics of professions :

- esoteric body of knowledge acquired through higher education *(which is said to justify…*
- autonomy in their work (non-professionals generally take more orders)
- professional body controls membership and sets standards of practice *(so as to…*
- fulfill an important social function; represent commitment to a social good.

# Characteristics of professions :

- I.T. "professionals" may not be the purest of professionals, but neither are they bottom of the professions' continuum.
- Do computing professions measure up to these criteria for a strongly differentiated profession? To become a computing professional, an individual must acquire specialized knowledge about discrete algorithms and relational database theory and specialized skills such as software development techniques and digital system design.

# Characteristics of professions :

- Computing professionals usually learn this knowledge and acquire these skills by earning a degree in computer science, computer engineering, information systems, or a related field.
- As in engineering, a bachelor's degree currently suffices for entry into the computing professions. The knowledge base for computing expands through research in computer science conducted in universities and in industrial and government laboratories.

# WHAT ARE THE RESPONSIBILITIES OF COMPUTING PROFESSIONALS?

- When I.T. professionals take jobs, they enter relationships with one or more of :

• employers • clients • co-professionals • society

# Employer–Employee

- Most computing professionals work for employers. The employment relationship is contractual: The professional promises to work for the employer in return for a salary and benefits.
- Professionals often have access to the employer's proprietary information such as trade secrets, and the professional must keep this information confidential. Besides trade secrets, the professional must also honor other forms of intellectual property owned by the employer:
- The professional do not have the right to profit from independent sale or use of this intellectual property, including software developed with the employer's resources.

# Employer–Employee

- The moral foundation of this relationship seems to be contractual; each party agrees to certain things in exchange for other things.
- Such a contractual relationship can be seen as fulfilling the categorical imperative; it is wrong for either party to exploit the other.
- Loyalty can be both good and bad.

# Client–Professional

- Whether a computing professional works as a consultant to an individual or as an employee in a large organization, the professional is obligated to perform assigned tasks competently, according to professional standards.
- These professional standards include not only attention to technical excellence but also concern for the social effects of computers on operators, users, and the public.
- When assessing the capabilities and risks of computer systems, the professional must be candid: The professional must report all relevant findings honestly and accurately. When designing a new computer system, the professional must consider not only the specifications of the client but also how the system might affect the quality of life of users and others.

# Client–Professional

- Again a contractual relationship. Characteristic is the disparity in expertise of the parties. At least 3 models attempt to handle this disparity :
- **agency – professional is the agent of the client**
- **paternal – professional decides for the client**
- **•fiduciary – client retains authority but decides**
  - on the basis of professional's advice. (NB. fiduciary implies trust)

# Society–Professional

- Another contractual relationship; society has a social contract with each profession. Society grants a profession the right to practice (perhaps with special privileges) in exchange for always practicing in ways that do not harm society.
- The correlation between knowledge and responsibility can be based on a principle of ordinary morality : "do no harm".
- Specifically, the more harm one can do, the more care must be exercised to avoid the harm.

# Professional–Professional

- Professionals generally believe they have obligations to other members of the profession.
- The basis should not be loyalty, self-interest or mutual protection. The basis ought to be adherence to certain standards of conduct.
- Rules about being honest, avoiding conflicts of interest, giving credit where it's due …can be seen as obligations of one member to all others.

- END
- NEXT CLASS CODES OF ETHICS