

# Module CS5052NI

## Professional Issues, Ethics and Computer Law

2023

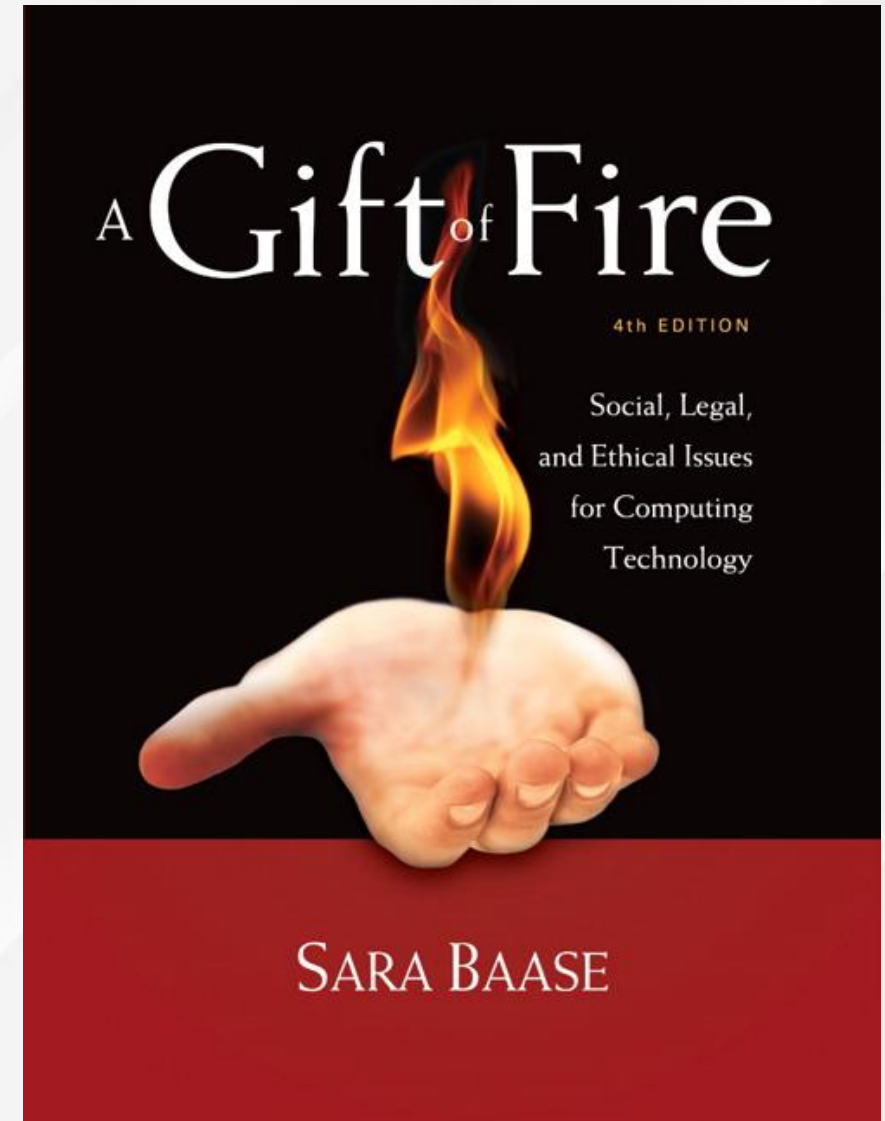
# A Gift of Fire

Fifth edition

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Chapter 9:

Professional Ethics and  
Responsibilities



# Agenda

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- What is Professional Ethics?
- Ethical Guidelines for Computer Professionals
- The BCS(British Computer Society) code of conduct (and in the workshop the IET code of conduct)
- A Methodology to aid Ethical Decisions



# “What do you want to be when you grow up?”



## What is a profession?

# Profession

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- Profession is a **job or a career path** that requires specialized education and training.
- Begins from scratch and develop the craft that caters to the professional values.
- Abide by the rules defined by the employer and owning up to the **responsibilities and obligations** as an employee.



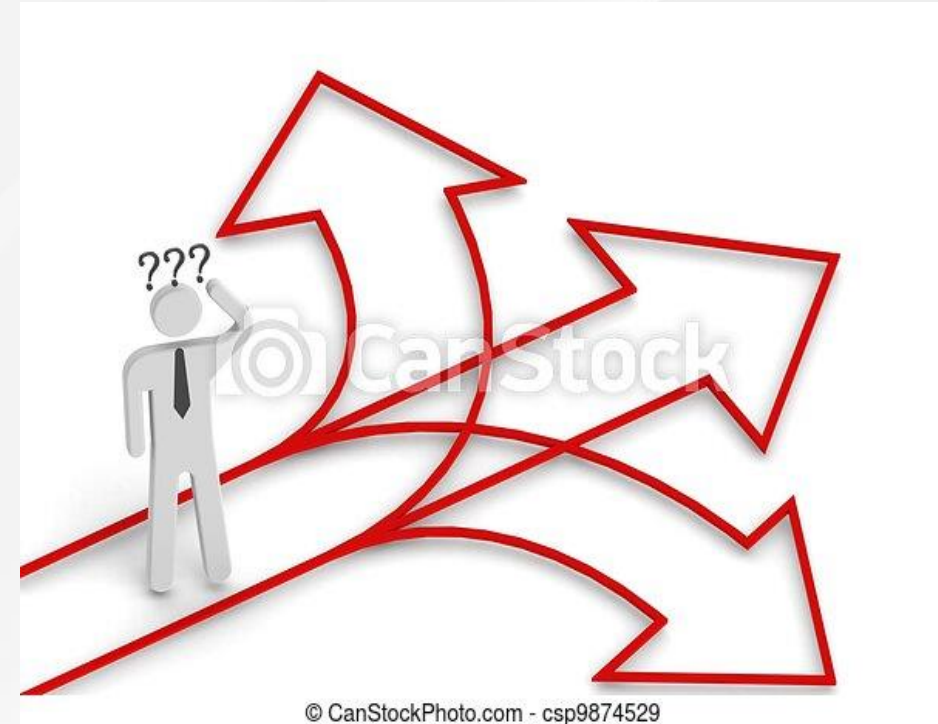
# Profession

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• There are special aspects to making **Ethical Decisions** in a **Professional Context**

• **Honesty** is one of the most fundamental values; however, Some Issues are controversial

**Examples:** What kinds of sites should, or should not a person visit in a workplace? Plagiarism or homage.





# Professional Ethics

- Ethical principles that monitor behavior in a professional environment.
- The ideologies of ethics, guided by company's values that needs to be applied in the **workplace setting**.
- Ensures regulatory enforcement of guidelines on how to act in any **given situation** and determine relationships and responsibilities toward customers, clients, co-workers, employees, employers, others who use one's products and services, and others whom they affect.



# Example: Medical Code of Ethics

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- **Hippocratic Oath:** created by American Medical Association in 1847.
- ***“Doctors and nurses must maintain patient confidentiality, respect the patient's dignity, be honest in all professional interactions and respect all human rights”.***
- Sometimes contradict, for example **Euthanasia**, when a patient with a terminal disease wishes to **prematurely end his/her life rather than suffer.**
- While ending a life is a form of harm, but so is **letting a patient suffer.** Physicians are expected to follow the law and seek changes in laws that are considered contrary to the benefit of their patients.



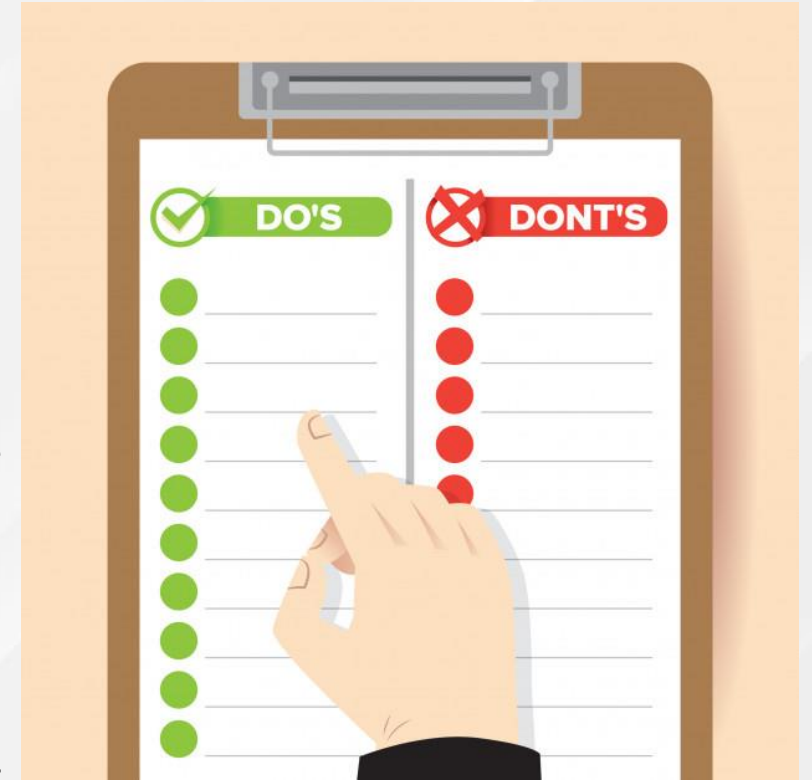
# General Code of Ethics and Professional Conduct

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- **Be inclusive, Be considerate and Be respectful.**
- **Choose your words carefully. Builds trust and shows that you care**
- **Don't harass.**
- **Obey the rules and regulations of the government**
- **Focus on resolving issues and learning from mistakes.**
- **Guide the overall impression of the employees which includes dress codes, general appearance, use of language, and so on.**

# Importance?

- Provide **ethical values**, set standards for **progressive policies** and develops **positive company culture**.
- **Build confidence, trustworthiness and loyalty.**
- Remind people in the profession that **ethical behavior is an essential part of their job**. It provides a foundation for **decision making**
- Provide **guidance, build trust** and comfortable working environment and the company's **brand value**.



# Code of ethics for computer professionals

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## Special Responsibilities Facing Computer Professionals and Users

- **Maintaining relationships with and responsibilities toward** customers, clients, coworkers, employees, and employers.
- **Making critical decisions** that have **significant consequences** for many people.
- Determining **how to manage, select, or use** computers in a professional setting.

# Is computer ethics different?

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- **Yes.** Computer ethics actually **analyses the nature and social impact of computers and the entire technology** and its ethical use in society.
- Example: Computer programs can be used in various sectors as a tool to make life easier. But can also **create problems when handled inappropriately.**
- Help in clarifying **the issues and the problems faced while developing, creating and using** the technology, its related products, and how **it should be dealt with.**

# What harm can a computer professional cause?

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- The ethical reasoning itself is **yet to be discovered when it comes to computer ethics**.  
That is, even if we find a cause, we will not know how to reason it.
- Example: Access to a lot of information, whether it be confidential details of clients or general data. Similarly, a virus, is also a computer program. These problems did not exist before the existence of computers.
- When harm is an **intentional part of the system**, ensure that the harm is **ethically justified**.

# Duties of Computer Professionals

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- A computer professional has a duty to **contribute to society and its people and acknowledge all people as stakeholders in computing**
- Are **experts in their field** and know customers rely on their **knowledge, expertise, and honesty**.
- **Understand their products** (and related risks) affect many people, some indirectly
- Follow good **professional standards and practices**.
- Must maintain **up to date knowledge on technology** and **educate the non-computer professionals**



# Guidelines for computer professionals

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- **Respect confidentiality:** A computing professional should understand **privacy** and the **rights and responsibilities** associated with the collection and **use of personal information**
- **Honest and fair:** Be **honest about qualifications**, and any **limitations** in competence to complete a task. Be **transparent and provide full disclosure** of products.
- **Maintain professional competence:** The **use of information and technology** must **never be discriminated**. Foster **fair participation** of all people, any discrimination is an **explicit violation of the Code**

# Guidelines for computer professionals

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- **Respect and protect personal privacy:** . Only use the information that **does not violate the rights of individuals and groups** . **Avoid harming others**
- **Understand relevant law:** **Technology** is meant for **everyone** and **anyone**, to be used **anywhere** and **anytime**. **New rules and regulations should be laid down** for their betterment.
- **Respect property rights:** Lot of **potential** and requires **new ideas, inventions, and creative aspects to explore**. Computing professionals should credit and develop ways to **protect the creator's works**

# Organizations monitoring code of ethics

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- **ACM** (Association for Computing Machinery)
- **IEEE** (Institute for Electrical and Electronics Engineers) Computer Society.
- They developed the **Software Engineering Code of Ethics and Professional Practice** (adopted jointly by the ACM and IEEE CS) and the **ACM Code of Ethics and Professional Conduct**.
- The codes emphasize the **basic ethical values of honesty and fairness, including professional behavior**.

# Ethical Guidelines for Computer Professionals

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1. **Understand what success means:** Developers (especially) and users of computer systems must see beyond simply writing code to complete a task.
2. **Design for Real Users:** To provide useful systems, real users must be included in the design stage. Include users (such as medical staff, technicians, pilots, office workers) in the design stages.
3. **Thorough Planning and Scheduling:** Planning helps to identify desired goals, reduce risks. Do a thorough, careful job when planning and scheduling a project and when writing bids or contracts.

# Ethical Guidelines for Computer Professionals

4. **Test With Real Users:** To provide safe systems, real users must be included in the testing stage.
5. **Evaluate Re-use of Software:** Don't assume existing software is safe and re-usable.
6. **Candidness:** Be open and honest about capabilities, safety, and limitations of software.
7. **Protect:** Require a convincing case for safety.
8. **Develop communication skills:** Feedback from real people helps **develop better products**.  
**Professional communication** is essential to achieve **information with precision**

# Chartered Institute for IT - BCS Code of Conduct

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1. Applies to all members, irrespective of their membership grade
2. The purpose of a code of conduct is to **develop and maintain a standard of conduct** that is **acceptable to the company, its vendors, customers and other employees.**
3. Governs **the conduct of the individual**, not the nature of the business or ethics of any Relevant Authority.
4. Members are expected **to exercise their own judgement** (which should be made in such a way as to be reasonably justified) to meet the requirements of the code and seek advice if in doubt.



# Breaches of the Code of Conduct

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1. If a member of BCS should know of, or become aware of, any breach by another member; **they are under an obligation to notify BCS.**
2. Breaches of the Code of Conduct **may also be brought to the attention of BCS** by others who are not members of BCS. Any breach of the Code of Conduct brought to the attention of BCS, or of which BCS becomes aware, will be **considered under the Institute's Disciplinary procedures.**
3. Where BCS receives information that a member has been convicted of a criminal offence, the member, when **asked will provide a Standard Disclosure Certificate or other similar notice providing evidence of their criminal record (if any) within 28 days.**
4. Note that not all convictions are relevant to membership in BCS and each case will be considered individually

# BCS Code of Conduct



- Annex A to the code sets examples of interpretation of the tenets of professional conduct and form part of this Code of Conduct.
- The code comprises four key principles:
  - You make IT for everyone: **Public Interest**
  - Show what you know, learn what you don't: **Professional Competence and Integrity**
  - Respect organization or individual you work for: **Duty to Relevant Authority**
  - Keep IT real. Keep IT professional. Pass IT on: **Duty to Profession**

# Definitions of terms to follow in BCS

1. **Legislation:** The laws and regulations related to people working in information technology, which the governing authorities of any country set towards the individual or organization.
2. **Third Parties:** “Any person or organization that might be affected by your activities in your professional capacity, irrespective of whether they are directly aware or involved in those activities”.



# Definitions of terms to follow in BCS

**3. Relevant Authority:** “The person(s) or organization(s) which has / have authority over the activity of individuals in their professional capacity.”

1. For practicing BCS members, this is normally an employer or client.
2. For us, the **academic institution** is the **relevant authority**.

- Example: When students have any complaints about their academics, they go to the academic institution to gain some insight. **Academic institutions** also create laws and regulations that help the students.

# Public Interest

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You shall:

- a. Have due **regard for public health, privacy, security and wellbeing of others** and the environment.
- b. Have due **regard for the legitimate rights of third parties**.
- c. Conduct your professional activities **without discrimination** on the grounds of sex, sexual orientation, marital status, nationality, color, race, ethnic origin, religion, age or disability, or of any other condition or requirement
- d. Promote **equal access to the benefits** of it and seek to **promote the inclusion of all sectors** in society wherever opportunities arise.

# Professional Competence and Integrity

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## You shall:

- a. Only undertake to do work or provide a service that is **within your professional competence**.
- b. **Not claim any level of competence that you do not possess.**
- c. **Develop your professional knowledge, skills and competence on a continuing basis, maintaining awareness of technological developments, procedures, and standards that are relevant to your field.**
- d. **Ensure that you have the knowledge and understanding of legislation** and that you comply with such legislation, in carrying out your professional responsibilities.
- e. **Respect and value alternative viewpoints** and, seek, accept and offer honest criticisms of work.
- f. Avoid injuring others, their property, reputation, or employment by false or malicious or negligent action or inaction.
- g. Reject and will not make any offer of bribery or unethical inducement



# Duty to Relevant Authority

You shall:

- a. Always carry out professional responsibilities with **due care and diligence whilst exercising your professional judgement.**
- b. Avoid any situation that give rise to **a conflict of interest between you and your relevant authority.**
- c. Accept professional responsibility for your work and for the work of colleagues who are defined in each context as working under your supervision
- d. Do not disclose or authorize to be disclosed, or use for personal gain or to benefit a third party, confidential information except with the permission of your relevant authority, or as required by legislation.
- e. NOT misrepresent or withhold information on the performance of products, systems or services (unless lawfully bound by a duty of confidentiality not to disclose such information) or take advantage of the lack of relevant knowledge or inexperience of others.

# Duty to the Profession

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You shall:

- a. Accept your personal duty to uphold the reputation of the profession and not take any action which could bring the profession into disrepute.
- b. Seek to improve professional standards through participation in their development, use and enforcement.
- c. Uphold the reputation and good standing of BCS, the chartered institute for it.
- d. Act with integrity and respect in your professional relationships with all members of BCS and with members of other professions with whom you work in a professional capacity.
- e. Notify BCS if convicted of a criminal offence or upon becoming bankrupt or disqualified as a company director and in each case give details of the relevant jurisdiction.
- f. Encourage and support fellow members in their professional development

# Nepal's Context

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- Federation of Computer Association Nepal (CAN Federation)
- IT Professional Forum (ITPF)
  - Sectorial Member of CAN Federation
- Forum of IT Nepal (FIT Nepal)
  - Not functional anymore
- The Internet Service Providers' Association of Nepal (ISPAN)
  - Sectorial Member of CAN Federation

# CAN Federation

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- Formed as CAN in May 1992 but was formally registered in December 1992
- Later registered as **Federation of Computer Association Nepal** (CAN Federation) in January 2015
- Involvement of Professionals, Specialists, Institutions and related organizations from ICT sector in Nepal.
- Autonomous, Non-political, Non-partisan, Non-profitable and service oriented sector of ICT (Information and communications technology)

# CAN Federation - Objectives

- To assist in **Utilization, Enhancement and Promotion of Information and Computer Technology** within Country and to play as major body in facilitating private **ICT organizations**.
- To help develop **strategies** to meet necessary requirements for **development of literacy and skills** regarding Computer Science.
- To play as major body in facilitating **private ICT organizations**.
- To **provide & protect rights and privileges**, benefits to individuals, institutions, companies and organizations affiliated
- To provide **support & facilities to general**, corporate and honorary members.
- To ensure **ICT advocacy, advisory and implementation with government coordination**.
- To assist in **Institutional Development of Information Communication Technology**

# Ethical traps of professionals

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- **Lying** to cushion the blow of bad news or potential bad news
- **Saying something and doing another.**
- **I do this because everybody does this**, so everybody's doing it? You just follow suit.
- **Not researching** before doing something.



# Ethical dilemmas in business

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- Conflict of interest
- Plagiarism
- Anonymous /Unnamed sources
- Offending or distasteful contents
- Invasion of Privacy
- Bias
- Commitment to accuracy

So how do you save yourselves from this dilemmas?

# Ethical dilemmas in business

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- Ethical trap consists of either **following the rules or breaking them**.
- Ethical decision-making consists of **complexities** and **dilemmas**, no matter how elaborate they may be. Just **Remember if it's necessary, it's ethical**.
- This approach often leads to **ends-justify-the-means reasoning**.
  - If we justify our actions by **saying it's for a good cause or it is important**, that loosens **our interpretation of deceit, discretion and protection**, conflicts of interest, favoritism and biases, and violations of rules and regulations.

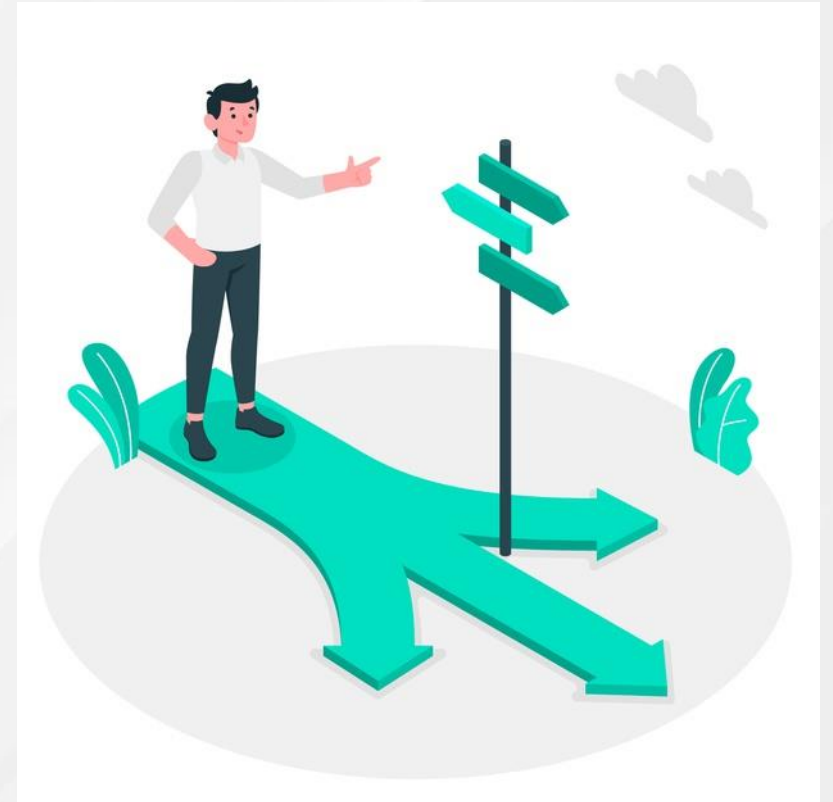
# Whistleblowing

- Term used when a worker passes a complaint on information concerning **wrongdoing**.
- Individuals **acting on behalf of the public, with no intention of getting a financial windfall**.
- They speak out because they genuinely **believe they have an ethical obligation** to do so.
- They act at great **personal and professional risk** to bring **wrongdoing to light**, and they **almost always face serious retaliation** from their employers, including **discipline, demotion and even termination**.



# So how do you save yourselves from the trap?

- **Following the rules or breaking them**
- Ethical decision-making consists of **complexity and dilemmas**
- **Blurs line** between right and wrong
- Treat ethical obligations as **factors** to be considered in the **decision-making process**, rather than as **ground rules**.



# Introduction and methodology Phase 1: Brainstorming phase



**Brainstorming** is a method design teams use to generate ideas to solve clearly defined design problems.

In controlled conditions and a free-thinking environment, teams approach a problem by such means as “**How Might We**” questions.

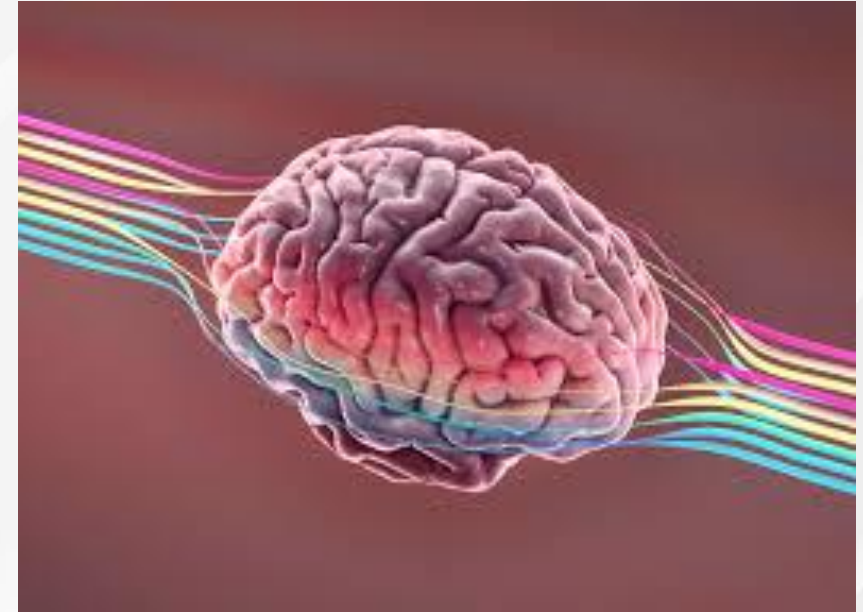
They produce a vast array of ideas and draw links between them to find potential solutions

# Rules to follow

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## Rule to follow

- Set a time limit
- Encourage producing a variety of ideas
- Do not criticize ideas
- Encourage weird and wacky ideas
- Build on others' ideas
- Stay visual
- Allow one conversation at a time



# Analyze difficult Ethical Scenarios

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1. State the nature of the ethical issue you've initially spotted
2. List the relevant facts
3. Identify stakeholders
4. Clarify the underlying values
5. Consider consequences
6. Identify relevant rights/duties
7. Reflect on which virtues apply
8. Consider relevant relationships
9. Develop a list of potential responses
10. Use moral imagination to consider each option based on the above considerations
11. Choose the best option
12. Consider what could be done in the future to prevent the problem



# Introduction and Methodology Phase 1: Brainstorming phase- Divergence

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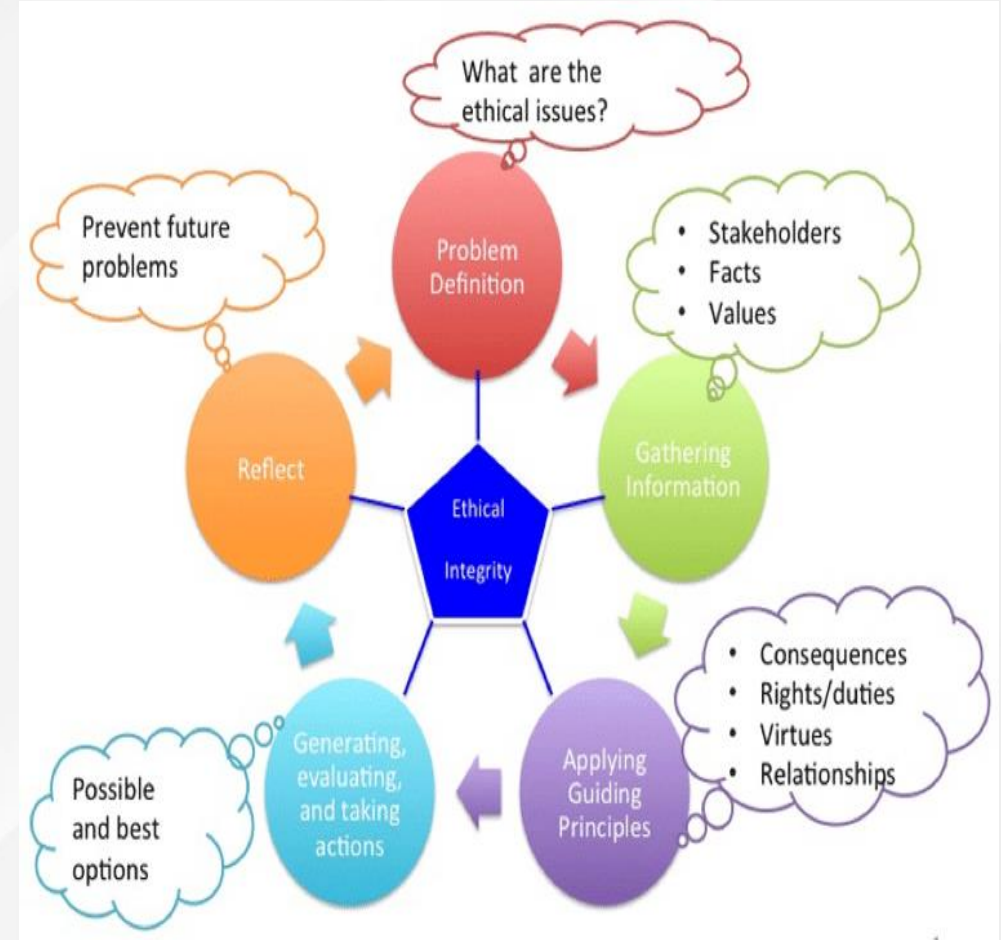
- Divergence is when you gather as many ideas as possible, with no restrictions.
- Write every idea, brilliant or silly, on the meeting room
- Not every idea has to be the right answer but throwing all options out there may spark something amazing.
- Take a time to create ideas
- Don't be frustrated – this is normal! It just means it's time to move on to the next brainstorming step: convergence.

# How to analyze difficult Ethical Scenarios

## Introduction and Methodology

### 1. Brainstorming phase

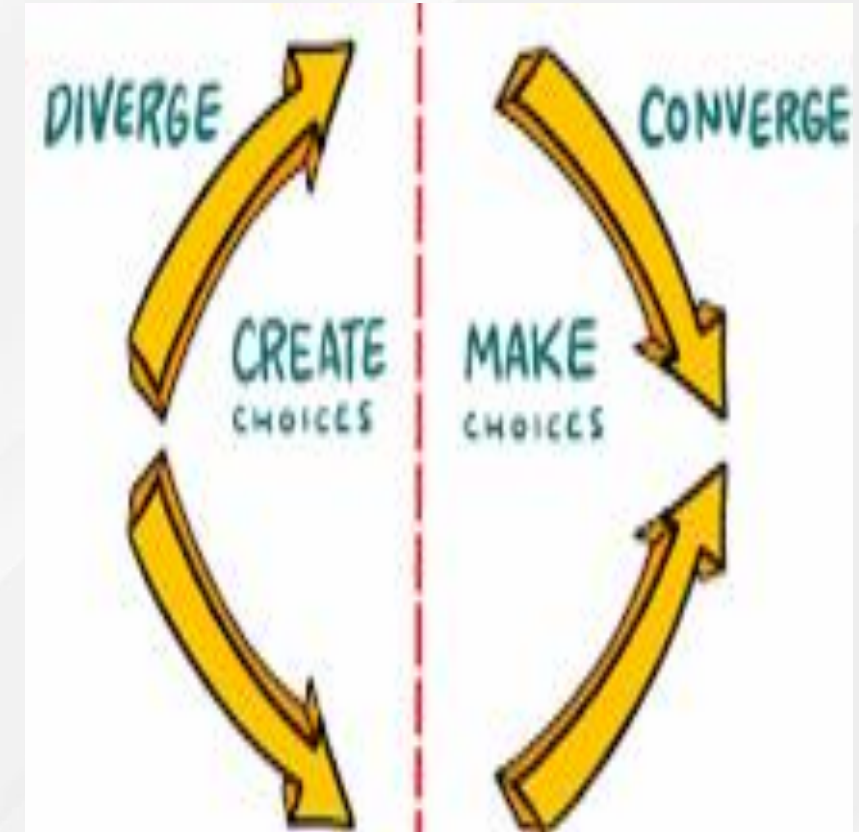
- List all the **people and organizations affected** (the stakeholders)
- List **risks, issues, problems, and consequences**
- List **benefits**. Identify **who gets each benefit**
- In cases where **no simple yes or no decision**, rather one has to choose, **list possible actions**.



# Introduction and Methodology Phase 2:

## Brainstorming phase- Convergence

- Now it's time to reign in your thoughts.
- Take all of the ideas you've written down and weed out the ones that will not work. Only remove ideas that will not work for very plain, unavoidable reasons, such as budget or staff restrictions.
- Do not erase an idea from the dry-erase board just because you are not sure how to do it. Work as a team to determine the best idea and create a plan to put it into action.



# Introduction and Methodology Phase 3:

## Brainstorming phase- Developing an action plan

- Once the time limit is reached, discuss and evaluate the ideas using the predetermined evaluation criteria.
- Create a condensed list of ideas, combine ideas where appropriate, and eliminate duplicates.
- Rate the ideas, and then distribute the final list of ideas to the appropriate party.
- One has done a lot of work to get this far – follow through and see where it takes you. Work as a team to create the following steps and bring your vision to life.

*Brainstorming gives you a chance to capture these ideas and put them into action.*



# How to analyze difficult Ethical Scenarios

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## Analysis phase

- Identify **responsibilities** of the decision maker
- Identify **rights** of stakeholders
- Consider **the impact of the options on the stakeholders** (consequences, risks, benefits, harms, costs)
- Categorize **each potential action** as **ethically obligatory, prohibited, or acceptable**
- When there are multiple options, **select one, considering the ethical merits of each**, courtesy to others, practicality, self-interest, personal preferences, etc.

# Any questions?



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