service, based on current technical and professional standards and relevant legislation;

- **Act diligently** and in accordance with applicable technical and professional standards.
- Maintaining professional competence requires a continuing awareness and an **understanding of relevant technical, professional and business developments**.
- **Diligence encompasses the responsibility to act in accordance with the requirements of an assignment, carefully, thoroughly and on a timely basis**.
- CA shall take reasonable steps to ensure that those working in a professional capacity under the accountant's authority have appropriate training and supervision.

Example

R ltd. has present obligation to dismantle oil rigs at the end of 10th year but R ltd. decided to record the cost as & when incurred although they are aware of treatment under Ind AS 37 & they have not disclosed it in the financial statement. Now, In this case if CFO is aware of the treatment under Ind AS 37 and does not communicate, there is a breach of fundamental principle professional behaviour and by knowingly allowing Directors not to apply Ind AS, he breached the fundamental of professional competence.

In this case he will be guilty of professional misconduct under clause 5, 6, 7 of Part-I of Second Schedule of Chartered Accountants Act, 1949.

D Confidentiality

A Chartered Accountant shall comply with the principle of confidentiality, which requires an accountant to **respect the confidentiality of information acquired as a result of professional and employment relationships**. An accountant shall:

- Be alert to the possibility of inadvertent disclosure, including in a social environment, and particularly to a close business associate or an immediate or a close family ember;
- Maintain confidentiality of information within the firm or employing organization;
- Maintain confidentiality of information disclosed by a prospective client or employing organization;
- Not disclose confidential information without proper and specific authority, unless there is a legal or professional duty or right to disclose;
- Not use confidential information for the personal advantage of the accountant or for the advantage of a third party;
- Not use or disclose any confidential information, either acquired or received as a result of a professional or employment relationship, after that relationship has ended; and

⇨ Take reasonable steps to ensure that personnel under the accountant's control, and individuals from whom advice and assistance are obtained, respect the accountant's duty of confidentiality.

For instance, confidentiality is a paramount ethical principle that should not be reached when providing payroll services to clients, unless required by law or authorized by the client.

⇨ The following are **circumstances where CAs are or might be required to disclose confidential information or when such disclosure might be appropriate:**

(a) Disclosure is required by law, for example:

i. Production of documents or other provision of evidence in the course of legal proceedings; or

ii. Disclosure to the appropriate public authorities of infringements of the law that come to light;

(b) Disclosure is permitted by law and is authorized by the client or the employing organization; and

(c) There is a professional duty or right to disclose, when not prohibited by law:

i. To comply with the requirements of peer review or quality review of the Institute

ii. To respond to an inquiry or investigation by a professional or regulatory body;

iii. To protect the professional interests of a CA in legal \proceedings; or

iv. To comply with TPS, including ethics requirements.

Notes

A CA shall continue to comply with the principle of confidentiality even after the end of the relationship between the accountant and a client or employing organization. When changing employment or acquiring a new client, the accountant is entitled to use prior experience but shall not use or disclose any confidential information acquired or received as a result of a professional or employment relationship.

E Professional Behaviour

When promoting himself and his work, a CA **shall not bring the profession into disrepute**. A CA is required to conduct his affairs in a manner that he remains outside the boundaries of professional and other misconduct. A CA shall be honest and truthful and shall not make:

⇨ Exaggerated claims for the services offered by, or the qualifications or experience of, the accountant; or

- Disparaging references or unsubstantiated comparisons to the work of others.

Any direct or indirect measures to advertise any professional/other facts which are in violation of Advertisement Guidelines issued by the Council of the Institute from time to time.

3 THE CONCEPTUAL FRAMEWORK

(Identify → Evaluate → Address → Exercise judgement → Remain alert)

The **CA shall apply** the conceptual framework to **identify, evaluate and address threats to compliance with the fundamental principles**.

(a) Identify threats to compliance with the fundamental principles;

(b) Evaluate the threats identified; and

(c) Address the threats by eliminating or reducing them to an acceptable level.

When applying the conceptual framework, the CA shall:

(i) Exercise professional judgment;

(ii) Remain alert for new information and to changes in facts and circumstances; and Use the reasonable and informed third party test.

Exercise of Professional Judgment

Professional judgment involves the application of relevant training, professional knowledge, skill and experience commensurate with the facts and circumstances, including the nature and scope of the particular professional activities, and the interests and relationships involved. In relation to undertaking professional activities, the exercise of professional judgment is required when the CA applies the conceptual framework in order to make informed decisions about the courses of actions available, and to determine whether such decisions are appropriate in the circumstances.

In exercising professional judgment to obtain this understanding, the CA might consider, among other matters, whether:

- There is reason to be concerned that potentially relevant **information might be missing** from the facts and circumstances known to the accountant.
- There is an **inconsistency between the known facts and circumstances** and the accountant's expectations.
- The accountant's **expertise and experience** are sufficient to reach a conclusion.
- There is a need to **consult with others** with relevant expertise or experience.
- The **information provides a reasonable basis** on which to reach a conclusion.

- The accountant's **own preconception or bias** might be affecting the accountant's exercise of professional judgment.
- There might be **other reasonable conclusions** that could be reached from the available information.

Reasonable and Informed Third Party

The reasonable and informed third party test is a consideration by the CA about **whether the same conclusions would likely be reached by another party**, party who is reasonable and informed third party, who weighs all the relevant facts and circumstances that the accountant knows, or could reasonably be expected to know, at the time the conclusions are made.

Part-2 Chartered Accountants in Service

1 CONFLICTS OF INTEREST

A CA shall not allow a conflict of interest to compromise professional or business judgment.

Examples of circumstances that might create a conflict of interest include:

- Serving in a management or governance position for two employing organizations and sharing/using confidential information of one for other.
- Undertaking a professional activity for each of two parties in a partnership, where both parties are employing the accountant to assist them to dissolve their partnership.
- Preparing financial information for certain members of management of the accountant's employing organization who are seeking to undertake a management buy-out.
- Being responsible for selecting a vendor for the employing organization when an immediate family member of the accountant might benefit financially from the transaction.
- Making investment decisions for a company, affecting own/relatives investment portfolio.

Three step approach to dealing with conflict of Interest

1 STEP Conflict Identification

A CA shall **take reasonable steps** to identify circumstances that might create a conflict of interest, and therefore a threat to compliance with one or more of the fundamental principles. Such steps shall include identifying:

I. The **nature of the relevant interests and relationships** between the parties involved; and
II. The **activity and its implication** for relevant parties.

2 STEP Threats created by Conflict of Interest

In general, the **more direct the connection** between the professional activity and the matter on which the parties interests conflict, the **more likely the level of the threat is not at an acceptable level.**

An example of eliminating conflict is withdrawing from the decision-making process related to the matter giving rise to the conflict of interest.

Examples of safeguards to address threats

i. Restructuring or segregating certain responsibilities and duties.

ii. Obtaining appropriate oversight, for example, acting under the supervision of an executive or non-executive director.

3 STEP Disclosure and Consent

It is generally necessary to:

i. **Disclose the nature of the conflict of interest** and how any threats created were addressed to the relevant parties including to the appropriate levels within the employing organization affected by a conflict; and

ii. **Obtain consent from the relevant parties** for the CA to undertake the professional activity when safeguards are applied to address the threat.

Example

Alaap Ltd. is seeking additional capital to upgrade its equipment and meet international production standards, as it has potential firm orders contingent on this. However, the current cash flow projections do not meet the bank's lending criteria, which require strong cash flow projections and a Debt Service Coverage Ratio exceeding 10. The directors, in a bid to secure financing, assure the bank that the financials will meet the criteria and that a report from the newly appointed CA will confirm this. The recently employed accountant, has personal financial obligations and not hence faces a conflict of interest due to personal financial commitments that make him reluctant to risk losing his job.

Ethical Conflicts and Principles in above example

1. **Conflict 1:** The accountant's personal circumstances clash with his professional duty to provide accurate financial information to the bank.
2. **Conflict 2:** The directors have a duty to shareholders and employees to act in their best interests, potentially conflicting with the need for accurate information for the bank's lending decision.

Ethical Principles Guidling the Accountant

1. **Objectivity:** The accountant must provide unbiased and accurate information, regardless of personal or professional pressures of losing his job.
2. **Integrity:** The accountant must act honestly and straightforwardly, ensuring that correct information is disclosed to avoid compromise of integrity.
3. **Professional Competence:** The accountant must prepare cash flow projections to the best of his professional judgment, reflecting the true financial position and shouring more positive position.

Appropriate action

As a professional, he is responsible for presenting the truth, and not to indulge in 'creative accounting' owing to pressure. Being an advisor to the directions, he must prevent deliberate misrepresentation to the bank, no matter what the consequences to him are personally. This is in the long-term interests of the company and its survival.

However, if he submits the incorrect projected statement of cash flows, he would be subject to professional misconduct under Clause 1 of Part II of Second Schedule of the CA Act, 1949. As per the Guidelines issued by the Council, a member of the Institute who is an employee shall exercise due diligence and shall not be grossly negligent in the conduct of his duties.

2 PREPARATION AND PRESENTATION OF INFORMATION

When preparing or presenting information, a Chartered Accountant shall:

- Prepare or present the information in accordance with a **relevant reporting framework**, where applicable;
- Prepare or present the information in a manner that is intended **neither to mislead nor to influence contractual or regulatory outcomes inappropriately**;
- **Exercise professional judgment to**:
  - i. Represent the facts accurately and completely in all material respects;
  - ii. Describe clearly the true nature of business transactions or activities; and
  - iii. Classify and record information in a timely and proper manner; and
- **Not omit anything** with the intention of rendering the information misleading or of influencing contractual or regulatory outcomes inappropriately.

Example: – using an unrealistic estimate with the intention of avoiding violation of a contractual requirement.

A Chartered Accountant shall take into account following points:-

A Use of Discretion in Preparing or Presenting Information

Preparing or presenting information might require the exercise of discretion in making professional judgments. The CA shall not exercise such discretion with the intention of misleading others or influencing contractual or regulatory outcomes inappropriately.

Examples of ways in which discretion might be misused to achieve inappropriate outcomes include:

- Determining **estimates**, for example, determining fair value estimates in order to misrepresent profit or loss.
- Selecting or changing an **accounting policy** or method among two or more alternatives permitted under the applicable financial reporting framework, for example, selecting a policy for accounting for long-term contracts in order to misrepresent profit or loss.
- Determining the **timing of transactions**, for example, timing the sale of an asset near the end of the fiscal year in order to mislead.
- Determining the **structuring of transactions**, for example, structuring financing transactions in order to misrepresent assets and liabilities or classification of cash flows
- Selecting disclosures.

B Relying on the Work of Others

A CA who intends to rely on the work of others, either internal or external to the employing organization, shall exercise professional judgment to determine what steps to take, if any, in order to fulfil the responsibilities.

Factors to consider in determining whether reliance on others is reasonable include:

- The **reputation and expertise** of, and resources available to, the other individual or organization.
- Whether the other individual is subject to **applicable professional and ethics standards**.

Such information might be gained from prior association with, or from consulting others about, the other individual or organization.

C Addressing Information that is or Might be Misleading

When the CA knows or has reason to believe that the information with which the accountant is associated is misleading, the accountant shall take appropriate actions to seek to resolve the matter including :

- **Discussing concerns that the information is misleading** with the CA's superior and/or the appropriate level(s) of management within the accountant's employing organization or TCWGH and requesting such individuals to take appropriate action to resolve the matter. Such action might include:
  i. Having the information corrected.
  ii. If the information has already been disclosed to the intended users, informing them of the correct information.
- **Consulting the policies and procedures of the employing organization** (for example, an ethics or whistle-blowing policy) regarding how to address such matters internally. If the accountant continues to have reason to believe that the information is misleading, the following further actions might be appropriate provided that the accountant remains alert to the principle of confidentiality:
- **Consulting with:**
  i. The Institute
  ii. The internal or external auditor of the employing organization
  iii. Legal counsel.
- Determining whether any requirements exist to **communicate to**:
  i. Third parties, including users of the information.
  ii. Regulatory and oversight authorities.

  If after exhausting all feasible options, the CA determines that appropriate action has not been taken and there is reason to believe that the information is still misleading, the accountant shall refuse to be or to remain associated with the information.

Example

Sunshine Ltd., a listed cosmetics company, is considering a new leasing arrangement, but is concerned about how it might affect existing debt covenants. The directors and CFO propose that the lease agreement be drafted in such a way that it is a series of six ten-month leases rather than a single five-year lease in order to utilize the short-term lease exemption available under Ind AS 116, Leases. This approach may allow them to meet debt covenant requirements, but could be contrary to accounting standards, potentially misrepresenting the company's true financial position. This action raises ethical concerns, as it may breach principles of objectivity and integrity outlined in the Code of Ethics. The CFO must prioritize compliance with accounting standards and ethical responsibilities, as failure to do so could lead to professional misconduct charges (Chapter 2 of Council General Guidelines. Misconduct under clause 1; Part II to Schedule II to CA Act, 1949).

3 ACTING WITH SUFFICIENT EXPERTISE

A CA shall not intentionally mislead an employing organization as to the level of expertise or experience possessed.

A **self-interest threat to compliance** with the principle of professional competence and due care **might be created if a CA has**:

- **Insufficient time** for performing or completing the relevant duties.
- **Incomplete, restricted or otherwise inadequate information** for performing the duties.
- **Insufficient experience**, training and/or education.
- **Inadequate resources** for the performance of the duties.

Examples of actions that might be safeguards to address such a self-interest threat include:

- **Obtaining assistance or training** from someone with the necessary expertise.

4 FINANCIAL INTERESTS, COMPENSATION AND INCENTIVES LINKED TO FINANCIAL REPORTING AND DECISION MAKING

A CA shall not manipulate information or use confidential information for personal gain or for the financial gain of others.

CAs own or their close family members' financial interests can pose threats to adhering to fundamental principles, especially when linked to financial reporting and decision-making incentives.

Examples of circumstances that might create a self-interest threat include situations in which the CA or an immediate or close family member:

- Has a motive and opportunity to manipulate price- sensitive information in order to gain financially.
- Holds a direct or indirect financial interest in the employing organization and the value of that financial interest might be directly affected by decisions made by the accountant.
- Is eligible for a profit-related bonus and the value of that bonus might be directly affected by decisions made by the accountant.
- Participates in compensation arrangements which provide incentives to achieve targets or to support efforts to maximize the value of the employing organization's shares.

5 INDUCEMENTS, INCLUDING GIFTS AND HOSPITALITY

An inducement is an **object, situation, or action** that is used as a means to **influence another individual's behaviour**, but not necessarily with the intent to improperly influence that individual's behaviour. Inducements can range from minor acts of hospitality between business colleagues to acts that **result in non-compliance with laws and regulations**. An inducement can take many different forms, for example:

- Gifts.
- Hospitality.
- Entertainment.
- Political or charitable donations.
- Appeals to friendship and loyalty.
- Employment or other commercial opportunities.
- Preferential treatment, rights or privileges

Immediate or Close Family Members

A CA shall remain alert to potential threats to the accountant's compliance with the fundamental principles created by the offering of an inducement:

- By an immediate or close family member of the accountant to a counterparty with whom the accountant has a professional relationship; or
- To an immediate or close family member of the accountant by a counterparty with whom the accountant has a professional relationship. The accountant shall advise the immediate or close family member not to offer or accept the inducement.

One of the factors that is relevant in determining whether there is actual or perceived intent to improperly influence the behavior of the CA or of the counterparty is the nature or closeness of the relationship, between:

- The accountant and the immediate or close family member;
- The immediate or close family member and the counterparty; and
- The accountant and the counterparty.

For example, the offer of employment, outside of the normal recruitment process, to the spouse of the accountant by a counterparty with whom the accountant is negotiating a significant contract might indicate such intent.

6 RESPONDING TO NON-COMPLIANCE WITH LAWS AND REGULATIONS IN CASE OF EMPLOYMENT WITH LISTED ENTITIES

A CA might encounter or be made aware of non-compliance or suspected non- compliance in the course of carrying out professional activities. This section guides the accountant in assessing the implications of the matter and the possible courses of action when responding to non-compliance or suspected non-compliance with:

- **Laws and regulations generally recognized to have a direct effect** on the determination of material amounts and disclosures in the employing organization's FS; and
- **Other laws and regulations that do not have a direct effect** on the determination of the amounts and disclosures in the employing organization's FS, but **compliance with which**

***might be fundamental to the operating aspects of the employing organization's business**, to its ability to continue its business, or to avoid material penalties.*

A distinguishing mark of the accountancy profession is its acceptance of the responsibility to act in the public interest.

When responding to non-compliance or suspected noncompliance, the objectives of the CA are:

- *To **comply with the principles** of integrity and professional behaviour;*
- *By **alerting management** or, where appropriate, those charged with governance of the employing organization, to seek to:*
  - *i. Enable them **to rectify, remediate or mitigate the consequences** of the identified or suspected non-compliance; or*
  - *ii. **Determine the non-compliance** where it has not yet occurred; and*
  - *iii. To **take such further action** as appropriate in the public interest.*

*Non-compliance with laws and regulations comprises acts of omission or commission, intentional or unintentional, which are contrary to the prevailing laws or regulations **committed by the following parties**:*

- *The CA's employing organization;*
- *Those charged with governance of the employing organization;*
- *Management of the employing organization; or*
- *Other individuals working for or under the direction of the employing organization.*

Example of laws and regulations dealt in this sections:

⇨ Fraud, corruption and bribery.	⇨ Money laudering, terrorist financial and proceeds of crime.
⇨ Securities markets and trading.	⇨ Banking and other financial products and services.
⇨ Data protection.	⇨ Tax and pension liabilities and payments.
⇨ Environmental protection.	⇨ Public health and safety.

I Responsibilities of All Chartered Accountants

If protocols and procedures exist within the CA's employing organization to address non-compliance or suspected non-compliance, the accountant shall consider them in determining how to respond to such non-compliance.

2 Responsibilities of Senior Chartered Accountants in Service

- Senior CAs in roles like directors, officers, or senior employees have substantial influence and decision-making power over their organization's resources, including human, financial, technological, physical, and intangible assets.
- They are expected to be more proactive in addressing non-compliance or suspected non-compliance in the public interest compared to other accountants in the organization due to their influential roles and positions.

Responsibilities of Senior CAs in Service in case of Non-Compliance (& Other CAs)

- Addressing the Matter
- Determining Whether Further Action Is Needed
- Seeking Advice
- Determining Whether to Disclose the Matter to an Appropriate Authority
- Responsibilities of CA Other than Senior CA

A Addressing the Matter

If the senior CA identifies or suspects that non-compliance has occurred or might occur, the accountant shall, discuss the matter with the accountant's immediate superior, if any. If the accountant's immediate superior appears to be involved in the matter, the accountant shall discuss the matter with the next higher level of authority within the employing organization.

The senior CA shall also take appropriate steps to:

(a) Have the matter communicated to those charged with governance;

(b) Comply with applicable laws and regulations, governing the reporting of non-compliance or suspected non-compliance to an appropriate authority;

(c) Have the consequences of the non-compliance or suspected non-compliance rectified, remediated or mitigated;

(d) Reduce the risk of re-occurrence; and

(e) Seek to deter the commission of the non-compliance if it has not yet occurred.

In addition the senior CA shall determine whether disclosure of the matter to the employing organization's external auditor, if any, is needed.

Such disclosure would be pursuant to the senior CA's duty or legal obligation to provide all information necessary to enable the auditor to perform the audit.

B Determining Whether Further Action is Needed

The senior CA shall assess the appropriateness of the response of the accountant's superiors, if any, and those charged with governance.

Examples of circumstances that might cause the senior CA no longer to have confidence in the integrity of the accountant's superiors and those charged with governance include situations where:

- The accountant suspects or has evidence of their involvement or intended involvement in any non-compliance.
- Contrary to legal or regulatory requirements, they have not reported, or authorized the reporting of, the matter to an appropriate authority within a reasonable period.

C. Seeking Advice

As assessment of the matter might involve complex analysis and judgments, the senior CA might consider:

- Consulting internally.
- Obtaining legal advice to understand the accountant's options and the professional or legal implications of taking any particular course of action.
- Consulting on a confidential basis with the Institute.

D. Determining Whether to Disclose the Matter to an Appropriate Authority

Disclosure of the matter to an appropriate authority would be precluded if doing so would be contrary to law or regulation. Otherwise, the purpose of making disclosure is to enable an appropriate authority to cause the matter to be investigated and action to be taken in the public interest.

E. Responsibilities of CAs Other than Senior CAs

- A CA becomes aware of information concerning non-compliance or suspected non-compliance, the accountant shall seek to **obtain an understanding of the matter**, including **nature of the non- compliance or suspected non-compliance** and the circumstances in which it has occurred or might occur.
- In case of non -compliance has occurred or might occur, the accountant shall, **inform an immediate superior to enable the superior** to take appropriate action. If the accountant's immediate superior appears to be involved in the matter, the accountant shall inform the next higher level of authority within the employing organization.
- In exceptional circumstances, the CA may determine that **disclosure of the matter to an appropriate authority** is an appropriate course of action. When making such disclosure, the accountant shall act in **good faith and exercise caution** when making statements and assertions.

7 PRESSURE TO BREACH THE FUNDAMENTAL PRINCIPLES

A CA shall not:

- **Allow pressure from others** to result in a breach of compliance with the fundamental principles; or
- **Place pressure on others** that the accountant knows, or has reason to believe, would result in the other individuals **breaching the fundamental principles**.

A CA might face pressure that creates threats to compliance with the fundamental principles, for example an intimidation threat, when undertaking a professional activity. **Pressure might be explicit or implicit and might come from:**

- Within the **employing organization**, for example, from a colleague or superior.
- An **external individual or organization** such as a vendor, customer or lender.
- **Internal or external targets** and expectations.

Examples of pressure that might result in threats to compliance with the fundamental principles include:

Pressure related to conflicts of interest

Discussing the circumstances creating the pressure and consulting with others about those circumstances might assist the Chartered Accountant to evaluate the level of the threat. Such discussion and consultation, which requires being alert to the principle of confidentiality, might include:

- Discussing the matter with the individual who is exerting the pressure to seek to resolve it.
- Discussing the matter with the accountant's superior, if the superior is not the individual exerting the pressure.
- Escalating the matter within the employing organization, including when appropriate, explaining any consequential risks to the organization, for example with:
  - Higher levels of management.
  - Internal or external auditors.
  - Those charged with governance.
- Consulting with:
  - A colleague, superior, human resources personnel, or another CA;
  - Institute or industry associations; or
  - Legal counsel.

ACCOUNTING AND TECHNOLOGY

1 INTRODUCTION

- Accounting is a critical function for all businesses, as it enables them to track and manage their financial transactions, budgets, and investments.
- The field of accounting has undergone significant changes in recent years, primarily due to advancements in technology.
- As businesses have embraced digital transformation, the accounting profession has evolved, becoming more efficient and accurate with the help of new technologies.
- These technologies include cloud computing, artificial intelligence, and cybersecurity etc.
- The chapter discusses the benefits of each technology and how they have changed the way accountants perform their tasks. **For example,** cloud computing has made it possible for accountants to access financial data from anywhere.
- The chapter also examines the challenges that accounting professionals face in adapting to new technologies. **For example,** the implementation of new technologies can be costly, and many businesses may not have the resources to invest in them.

2 EVOLUTION OF ACCOUNTING : A Timeline

1. Ancient civilizations such as the **Egyptians, Greeks, and Romans.** — Accounting primarily involved record-keeping for tax purposes and for the management of government resources.
2. By the time of the **Roman Empire** — Government had access to detailed financial information.
3. In India — Chanakya authored a manuscript
   Mauryan Empire. — His book 'Arthashastra' contains few detailed aspects of maintaining books of accounts for a sovereign state.
4. **Italian Luca Pacioli: Father of accounting and bookkeeping** — First person to publish a work on double-entry bookkeeping. Subsequently, accounting practices evolved to include **double-entry bookkeeping.**

5	**Industrial revolution**	Due to the advent of machines and mass production, accounting became more complex, requiring more detailed records of financial transactions.
6	World's oldest and first professional chartered accountants' body, established	The Institute of Chartered Accountants of Scotland is the established by the Royal Charter in 1854.
7	19th Century	Institute of Chartered Accountants in England and Wales, Certified Practising Accountant Australia, American Institute of Certified Public Accountants and Chartered Accountants Ireland were established.
8	20th Century	Association of Chartered Certified Accountants was **established,** followed by organizations such as the **Institute of Chartered Accountants of India,** Institute of Singapore Chartered Accountants.
9	Post-industrial period	computers enabled accountants to automate many of the manual processes
10	Currently	**Upsurge of technology** in the accounting field involving **cloud computing** and artificial intelligence, are transforming the accounting profession, making it more efficient and accurate.

3 THE CURRENT STATE OF TECHNOLOGY IN ACCOUNTING

This section provides an in-depth overview of the current state of technology in the accounting profession. It discusses the various technologies used in accounting and their impact on the profession, including automation, cloud computing, and artificial intelligence.

Automation Process

Automation is the use of software and other tools to automate manual processes, making them faster and more accurate.

Example: Activities involved in the process of procuring groceries from a departmental store such as Walmart or Reliance Smart Bazaar **at the Front-End.**

STEP 1

The **customer picks** his/her groceries and reach the billing counter.

STEP 2

The person at the counter merely **scans the item's barcode.**

STEP 3

The scanning automatically **reads the data and inputs** the item procured and the corresponding selling price.

STEP 4

By scanning the barcode of each item, the **bills are generated** within a couple of minutes.

STEP 5

The customer makes the **payment, and the bill is printed** and handed over to the customer.

The entire process happens in a fraction of a second, saving valuable time and mitigating all errors. However, **at the backend, the below activities take place:**

1

As and **when the barcode of an item is scanned** at the billing counter, the inventory of the said item at the departmental store is simultaneously updated recording the issue/sale of the same. This ensures accuracy in maintenance of inventory data.
A periodical physical check of inventory will give conclusive evidence of the correctness of data generated by the system, thereby giving comfort on the management assertions of accuracy, valuation and existence of the inventory.

2

In certain cases, the **software is so programmed that the indirect taxes (GST) levied on the sale value** as per the invoice is updated simultaneously, which can get uploaded on the GST portal at the end of the day by the accounting team in the backend.
This ensures accuracy in returns uploaded, thereby minimizing the need for manual reconciliation and data maintenance.

3

Software are also programmed to ensure that the **bill amount is automatically displayed on the Point of Sale Machine,** through which the **customer makes the payment** either through **debit/credit card or through UPI.** In case the customer **opts to make payment in cash,** entering the amount on the Screen will open the cash drawer in which the cash paid is deposited.
Since the cash drawer is opened through the system only after logging in by the concerned person, in case of mismatch in cash balances, the concerned person can be identified, thereby reducing the chances of misappropriation of cash.

A Benefits of Automation Process

- A. Streamlining Data Entry
- B. Accelerating Data Processing
- C. Enhancing Accuracy
- D. Improving Decision-Making
- E. Saving Time and Money
- F. Facilitating Compliance

(A) Streamlining Data Entry:

Automation tools, such as optical character recognition (OCR) or barcode recognition technology, can help to automate the entry of data from source documents such as receipts and invoices. This can **reduce the amount of time and effort required** as well as minimizing the potential for human error.

(B) Accelerating Data Processing:

Automation can help to process large amounts of data/ large volumes of transactions more **quickly and accurately** than manual methods. **For example,** software can automatically categorize transactions into the appropriate accounts, calculate tax amounts, and generate financial statements, among other tasks.

(C) Enhancing Accuracy:

Automation can help to **reduce errors and discrepancies** in accounting processes. By **automating tasks** such as data entry and calculations, businesses can minimize the risk of errors caused by human error, improving the accuracy and reliability of their financial data.

(D) Improving Decision-Making:

Automation can provide **real-time insights into financial data,** enabling businesses to make informed decisions more quickly. With automated reporting, the **time spent on routine tasks is greatly minimized,** enabling businesses to gain deeper insights into their financial performance, **identify trends and patterns, and adjust their strategies accordingly.**

(E) Saving Time and Money:

Automation **reduces the amount of time and resources** required to perform manual tasks such as **data entry and reconciliations.** This results in businesses saving on staffing costs and increases productivity and enabling accountants to focus on higher-level tasks such as analysis and planning.

(F) **Facilitating Compliance:**

Automation helps business to **stay compliant with regulations and standards** by ensuring accounting practices meet the necessary requirements. As seen above, automation ensures accurate data for the purposes of return filing. Further, in case the systems are so programmed, **reporting tools can generate financial statements that meet the criteria of Ind AS or Indian GAAP** as the case may be. This would ensure minimizing the risk of non-compliance and potential penalties.

B Challenges in Automation Process

Automation also comes with its own set of **potential drawbacks and challenges**, some of them are mentioned below:

- It arises the need for **ongoing training and education** to keep up with the latest technology.
- Automation also presents **a risk of data breaches and cyber-attacks**, which can compromise the security and confidentiality of financial data.
- Due to automation, there exists **potential loss of jobs**. However, this can be mitigated by ensuring appropriate training to the workforce to remain updated with the technology.

C Robotic Process Automation

- Robotic Process Automation (RPA) is an emerging technology that **revolutionizes financial reporting processes**. RPA utilizes software robots or "bots" to **automate manual and repetitive tasks** in financial data processing, analysis, and reporting.
- RPA bots can **extract and consolidate data, perform calculations, generate reports, and ensure compliance with accounting standards**. The adoption of RPA in financial reporting improves accuracy, enhances efficiency, and frees up valuable time for finance professionals to focus on more strategic activities.

Moreover, RPA like automation enables organizations to achieve timely reporting, cost savings, and increased data integrity, ultimately leading to more reliable and insightful financial information.

EXAMPLE XYZ Company, a conglomerate following Ind AS 110 for consolidated financial statements, employs Robotic Process Automation (RPA) to enhance their reporting efficiency. RPA bots are deployed to extract and consolidate financial data from various subsidiaries, streamlining the process. These bots handle tasks like currency conversion, intercompany transaction reconciliation, and identifying intercompany transactions as per Ind AS 110. They automatically eliminate these transactions, reducing errors. The bots then retrieve and adjust data from the parent company's financial system, performing calculations for non-controlling interests, equity, and comprehensive income. Finally, they generate accurate and consistent consolidated financial statements, including the balance sheet, income statement, equity changes, and cash flow statement.

4 CLOUD COMPUTING

- Cloud computing refers to the **delivery of computing services over the internet.** It allows accountants to **access their data and software from any device** with an internet connection.
- During the COVID-19 computing **turned as a serious alternative** compared to traditional client-server architecture in physical locations controlled by the entities themselves.

A Common Applications / Cases of Cloud Computing

(i) Cloud Storage
(ii) Software as a Service (SaaS)
(iii) Infrastructure as a Service (IaaS)
(iv) Platform as a Service (PaaS)
(v) Cloud-based Communication and Collaboration
(vi) Cloud-based E-commerce
(vii) Big Data Analytics

(i) Cloud Storage:

Services like Dropbox, Google Drive, and Microsoft OneDrive offer cloud storage solutions that allow users to store and access their files and data from anywhere with an internet connection. Users can save documents, photos, videos, and other files in the cloud and synchronize them across multiple devices.

(ii) Software as a Service (SaaS):

SaaS platforms provide cloud-based software applications that users can access and utilize via the internet. Examples include Salesforce for customer relationship management (CRM), Slack for team collaboration, and QuickBooks Online for accounting and financial management.

(iii) Infrastructure as a Service (IaaS):

IaaS providers offer virtualized computing resources, including servers, storage, and networking infrastructure, on a pay-as-you-go basis. Examples include Amazon Web Services (AWS), Microsoft Azure, and Google Cloud Platform. These platforms allow businesses to scale their IT infrastructure based on demand without the need for physical hardware.

(iv) Platform as a Service (PaaS):

PaaS providers offer cloud-based platforms that enable developers to build, deploy, and manage applications without the complexity of infrastructure management. Examples include Microsoft Azure App Service, and Google App Engine.