★ Professionalism

Professionalism, the standards, practices, or motivations associated with a profession.

★ What is Professional employees

Professional employees are expected to prioritize their organization's interests over their own convenience.

Professional employees are employees of a certain status, who are expected, within limits, to put the interests of the organization they work for above their own convenience.

★ Professional piece of work

A professional piece of work means a piece of work that meets established standards of quality.

Professions – lawyers, doctors, dentists, accountants, veterinary surgeons, architects and so on

★ Characteristics of profession

- ➔ Requires substantial education and training.
- ➔ Members determine training and control entry.
- ➔ The profession is organized into one or more professional bodies.
- ➔ Adheres to codes of conduct enforced by professional bodies.

★ A professional body

A professional body usually starts by a group of people coming together because of a shared interest in a particular type of activity.

Eg:
The Chartered Institute for IT (BCS), originally called the British Computer Society, was established in 1957 by professionals in the emerging computer field to share ideas.

The Institute of Electrical and Electronic Engineers (IEEE), a global professional engineering society based in the USA, founded the first professional computing society in 1946.

★ What is the computer technology community in Sri Lanka ?

The Computer Society of Sri Lanka (CSSL) is a professional body and learned society that represents those working in information technology (IT) and computer science in Sri Lanka. It was founded in 1976 and incorporated in 1986 under the Companies Act, No. 17 of 1982

★ BCS's Code of Conduct is currently divided into the following sections

1. The Public Interest
2. Professional Competence and Integrity
3. Duty to the Relevant Authority
4. Duty to the Profession.

★ Professionalism of IT occupation

IT is a complex and evolving field that is still at its early stages.

As such it can be considered as a broad field as people can play different roles in the IT field. For example,

- ➔ Designing software and hardware
- ➔ Sell, maintain software and hardware
- ➔ Documentation
- ➔ Advice on security and maintenance
- ➔ Internet service providers
- ➔ Academics on computer science
- ➔ Designing and maintaining websites

★ There are 2 evolving trends that we can identify within computing

1. Computing as a Skill:

Computing is becoming a fundamental skill, much like reading and writing, necessary for many jobs. Due to its versatility, computing is applied across various domains, and individuals are identified by their specific field rather than as computer professionals. For instance, librarians, managers, engineers, and teachers use tools like word processors, email, and web browsers in their professions.

2. Computing in Degree Programs:

The evolution of computing is reflected in new degree programs and curricula in universities and educational institutes. Beyond traditional computer science and computer engineering, programs are now offered in fields like business (Information Management, Management Information Systems) and communication (Information Studies).

★ Characteristics of a professional

1. Mastery of Esoteric Body of Knowledge
2. Autonomy
3. Formal organization
4. Code of ethics
5. Social Function

IT as a profession based on 5 characteristics

1. Mastery of Esoteric Body of Knowledge

To identify as a profession, a special body of knowledge should be identified.

Now, different degree programs are offered than in the early days and computer professionals must master esoteric computer knowledge to perform their jobs.

Also, in the computing profession there are 2 divisions as **researchers and practitioners** as in other professions.

2. **Autonomy**

   Computer professionals aren't required to do tasks beyond normal capabilities, leading to less decision-making.

   Autonomy varies by role and workplace.

   Greater decision-making power is available to those with private practices or higher organizational positions.

3. **Formal organization**

   There is no single organization where all the professionals belong to the IT industry.

   There are several formal organizations like ACM and IEEE- CS (Institute for Electronics and Electrical Engineering Computer Society).

   Recently, they have started to work together to set curricula requirements for accreditation of degree programs in computing.

4. **Code of ethics**

   There are responsibilities for computer professionals to follow, imposed by different computer professional organizations like ACM and IEEE.

   There is no single code binding all computer professionals together.

5. **Social Function**

   Computing supports social functions like health, communication, transportation, safety etc. but are not itself a social function.

   While both computing and engineering are vital to society, computing cannot be clearly distinguished as a profession.

   However, it is closer to the professional side of the continuum than the non professional side.

★ What is Skill ?

Skill is the ability to translate knowledge into action to get the desired performance.

★ What are Professional skills ?

Professional skills are capacities that help you function within a work environment and perform at your highest level.

★ How do we acquire professional skills

1. Education (Formal and informal)
2. On the job training
3. Life experiences (good and bad)

1. **Education (Formal and informal)**

Research: College education is a natural way to improve your research abilities.

- ➔ Communication
- ➔ Writing
- ➔ De-stress
- ➔ Sociability
- ➔ Planning

2. **On the job training**

On-the-job training (OJT) is a type of employee development that provides hands-on experience and learning opportunities while performing job duties.

It is a valuable tool for organizations to enhance employee skills and improve productivity.

Skills - On the job training

Communication skills

Communication refers to one's ability to convey information to others.

These are important abilities in the workplace, no matter what your job. You need to be able to communicate with your employer, your colleagues, and your customers and clients.

- ➔ Body Language
- ➔ Listening
- ➔ Literacy
- ➔ Presentation Skills
- ➔ Public Speaking
- ➔ Verbal Communication

Cooperation

Cooperation is especially important at work.You need to be able to work well and get along with others in meetings, on team projects, and in other collaborative settings.

- ➔ Leadership
- ➔ Teamwork
- ➔ Creative Thinking
- ➔ Critical Thinking
- ➔ Flexibility
- ➔ Focus
- ➔ Organization
- ➔ Problem Solving
- ➔ Time Management

Time management

Time management is about planning and controlling how you spend your time on different tasks.

1. **Organization -** Keep a current calendar, tidy up your workspace, and maintain easy access to important documents.
2. **Prioritization -** Assessing each of your responsibilities for priority is key in being a good time manager.
3. **Goal–setting -** Setting both short and long-term goals can lead to success in your career.
4. **Planning**
5. **Delegation –** assign a specific task to someone else and give them the authority to complete that task.
6. **Stress Management -** Deal positively with stress to stay motivated and perform well.

Handling Criticism

At work, you will receive some negative feedback from your employer.

It is important that a job candidate can thoughtfully and professionally receive criticism, and grow from it.

Being able to handle criticism well takes a number of other life

- ➔ Apologizing
- ➔ Asking for Help
- ➔ Coping
- ➔ Giving and Receiving Feedback
- ➔ Thoughtfulness
- ➔ Willingness to Learn

Basic technology skills

Digital and technological literacy are important for nearly any job.

It's helpful to have a working knowledge of word processing and using the internet for communication or locating information.

Using basic computer equipment like printers, digital cameras and tablets is important too.

- ➔ Email Management
- ➔ Productivity Software
- ➔ Microsoft Office Suite
- ➔ Online Communication Software
- ➔ Smartphones
- ➔ Social Media Management
- ➔ Cloud Software
- ➔ Spreadsheets

3. **Life experiences (good and bad)**

IT Professional experience vs. Personal Experience

- ➔ **Under budget** (unexpected travel expenses)
- ➔ **on-time with limited resources / staff** (just myself/no help from anyone)
- ➔ **Lacking the skills / experience** (mountain driving on corrugated mountain roads for hundreds to thousands of KMs)
- ➔ unexpected and extremely complex problem with limited time & resources to resolve it
- ➔ **Unexpected challengers** (my own driving skills were insufficient)

Lesson from life experience example

- ➔ **Daily Planning -** beginning of day' quick planning session (simple 5 minute scrum between team members can open communications between otherwise very busy team members.)

- ➔ **Distant Warning Signs -** you can see and feel the risk all around you.

- ➔ **Mitigate the security risks**

- ➔ **Mistakes -** can happen to anyone...no matter how well prepared you are. Accept this as a fact of life. On a project, don't get yourself down, this can happen to anyone. Get it fixed, and learn from it!

- ➔ **Support -** Luckily, like on a good IT project, good people usually abound and help you out when you're down and out. You should treat these people well as they are key members of your team!

- ➔ **Status -** When traveling in new lands where you're a temporary visitor (like Project Manager who's managing a difficult project on tight timeframes)
knowing the truth of your current state. This will help you plan out your tomorrow far more effectively.

- ➔ **Disaster planning** is crucial whether you're exploring remote areas with an ill-equipped vehicle or managing an IT security project. Always have a plan ready for worst-case scenarios.

★ To identify your skills and decide what skills to develop, you could

- ➔ think about what you do in your current job
- ➔ reflect on your past education and work experiences
- ➔ think about the skills you've gained in daily life

➔ talk to people who know you well outside of work, for a different perspective
➔ write down a list of strengths and areas you'd like to improve
➔ take our skills health check to see what strengths you have

★ IT outsourcing

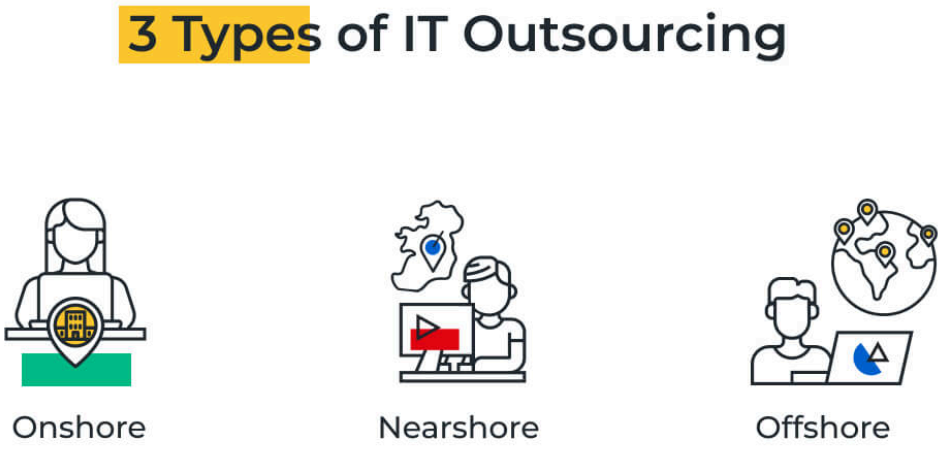
IT outsourcing is the use of external service providers to effectively deliver IT-enabled business processes, application service and infrastructure solutions for business outcomes.

Reasons for outsourcing

➔ Companies often outsource as a way to lower costs
➔ Improve efficiency and gain speed.
➔ Companies that decide to outsource rely on the third-party providers' expertise in performing the outsourced tasks to gain such benefits.
➔ The underlying principle is that because the third- party provider focuses on that particular task, it is able to do it better, faster and cheaper than the hiring company could.

Types of outsourcing

1. **Onshoring-**Relocating work or services to lower-cost location in the company's own country
2. **Offshoring -** Relocating work or services to third-party providers overseas.
3. **Nearshoring -** Relocating work or services to people in nearby, often bordering regions and countries.



★ Telecommuting

Telecommuting, or teleworking, is completing work from a location outside the office using the internet and phone.

What are the examples of telecommuting?

➔ Working remotely from home.
➔ Using cloud-based applications and services.
➔ Participating in online meetings and video conferencing.
➔ Sending and receiving emails, texts, and instant messages.
➔ Accessing company databases and applications through a secure VPN.
➔ Uploading and downloading files to cloud-based storage systems.

- ➔ Using virtual office software and collaboration tools.
- ➔ Participating in webinars, blogs, and other online forums.
- ➔ Working remotely from a remote office or coworking space.
- ➔ Using a VoIP or similar service for telephone communication.

What are the types of telecommuting?

1. **Full-time telecommuting -** Employees work from home or another remote location full-time.
2. **Part-time telecommuting -** Employees work from home or another remote location part-time.
3. **Job sharing -** Two or more employees share the same job but work from separate locations.
4. **Virtual teams -** Teams of employees work together online to collaborate on projects.
5. **Flexible hours -** Employees have flexible hours that allow them to work outside of traditional office hours.
6. **Compressed work week -** Employees work longer days with fewer days each week.
7. **Travel-based telecommuting -** Employees travel to their jobs but work from their remote location.

★ What is the difference between working from home and telecommuting?

Working from home means doing all your work from your home.

Telecommuting means working remotely from any location, like home, a coworking space, or a cafe.

★ Financial impact

- ➔ Commuting time and cost
- ➔ Real estate costs
- ➔ Productivity loss from unscheduled absences

★ To the employer, the main benefits of allowing employees to telecommute at least part of the time can include

- ➔ Reduced workspace needs
- ➔ Lower parking costs
- ➔ Non-existent relocation expenses
- ➔ Higher retention of valued employees

★ From the employees' perspective, telecommuting offers

- ➔ Less time spent commuting via car, train, or other means
- ➔ Lower commuting costs (gas, tolls, subway pass, etc.)
- ➔ Lower wardrobe expenses (from purchase and upkeep)
- ➔ Greater scheduling flexibility (allowing doctor visits to occur without much disruption)
- ➔ Greater work-life balance
- ➔ Reduced chance of illness thanks to sick co-workers

★ Disadvantages of telecommuting

1. Reduced opportunities for promotion (since employees are out of sight)
2. Greater potential for employees to work less
3. More employee isolation

★ Role model

A role model is someone others look to as a good example. A role model is someone who is worthy of imitation.

A role model is someone who others may emulate or admire because they're efficient or skilled in some way.

Characteristic

1. **Accountability -** Role models take responsibility for their actions and admit when they make mistakes.

2. **Hard Work -** Effective role models work hard to complete tasks and often exceed expectations.

3. **Positivity -** An effective role model maintains a positive attitude, even during challenges.

4. **Persistence -** Role models persist in their work to achieve effective outcomes. They tackle difficulties with urgency and resolve. Their dedication is noticeable and inspires others to show the same effort and attitude.

5. **Integrity -** Role models are admired in the workplace for their moral integrity. They embody honesty and consistently adhere to company rules and guidelines.

6. **Respect -** Role models prioritize treating everyone employees, coworkers, and customers with respect in all situations. They earn respect by consistently demonstrating respect towards others.

Benefits of role models

1. They increase employee morale
2. They inspire healthy competition
3. They create a positive atmosphere
4. They motivate others
5. They communicate openly

Bill Gates as a Role model

Gates is the co-founder of Microsoft, one of the largest and most influential technology companies in the world. He is known for his business savvy, philanthropy, and visionary leadership.

Example of Role model

- ➔ **Steve Jobs:** Jobs was the co-founder of Apple, one of the most innovative and iconic technology companies of all time. He was known for his creative vision, attention to detail, and unwavering commitment to quality.

- ➔ **Elon Musk:** Musk is the founder of several influential technology companies, including Tesla (electric cars), SpaceX (space exploration), and The Boring Company (tunneling and transportation). He is known for his ambitious vision, bold ideas, and willingness to take risks.

- ➔ **Mark Zuckerberg:** Zuckerberg is the co-founder and CEO of Facebook, the world's largest social networking platform. He is known for his innovative thinking, entrepreneurial spirit, and commitment to creating new opportunities for social interaction and communication.

- ➔ **Jeff Bezos:** Bezos is the founder and CEO of Amazon, one of the largest and most successful e-commerce companies in the world. He is known for his business acumen, strategic thinking, and relentless focus on customer satisfaction.

★ Ethics

Ethics or moral philosophy is the philosophical study of moral phenomena.

It is usually divided into three major fields:

1. **normative ethics**

   Normative ethics discovers and justifies universal principles that govern how people should act in any situation.

   The three main types of normative ethical systems are Utilitarianism, Kantianism, and Virtue Theory.

2. **applied ethics**

   Applied ethics examines concrete ethical problems in real-life situations,

3. **Metaethics.**

   Meta-ethics asks the question of what it means to do ethics?.

   In other words, meta-ethics questions how we can justify ethical judgments, or how we can prove that one ethical theory is better than another.

★ What Is Utilitarianism ?

Utilitarianism is a moral theory that promotes actions that increase happiness or pleasure and discourages actions that cause unhappiness or harm.

The 3 Generally Accepted Principles of Utilitarianism State That

1. Pleasure, or happiness, is the only thing that has intrinsic value.

2. Actions are right if they promote happiness, and wrong if they promote unhappiness.

3. Everyone's happiness counts equally. (Betham's principle of equality makes the government responsible for creating policies that would benefit all equally, not just the elite.)

The Limitations of Utilitarianism

1. Utilitarianism creates a black-and-white view of morality with no gray areas actions are either right or wrong.
2. It cannot predict future consequences with certainty, making outcomes uncertain.
3. It struggles to account for values like justice and individual rights.

★ Deontological ethics

Deontological ethics, in philosophy, ethical theories that place special emphasis on the relationship between duty and the morality of human actions.

Any system involving a clear set of rules is a form of deontology, which is why some people call it a "rule-based ethic".

The Ten Commandments is an example, as is the Universal Declaration of Human Rights.

★ Ethically constructive habits of mind and action

- ➔ Self- Reflection/Examination
- ➔ Looking for Moral Exemplars
- ➔ Exercising our Moral Imaginations
- ➔ Acknowledging Your Own Moral Strength
- ➔ Seeking the Company of Other Moral Persons

★ What is an Ethical Dilemma ? / (ethical paradox or moral dilemma)

An ethical dilemma (ethical paradox or moral dilemma) is a situation where a person has to choose between two options, and neither choice is fully acceptable from a moral standpoint.

How to Solve an Ethical Dilemma?

1. **Refute the paradox (dilemma):**
   The situation must be carefully analyzed. In some cases, the existence of the dilemma can be logically refuted.
2. **Value theory approach:**
   Choose the alternative that offers the greater good or the lesser evil.
3. **Find alternative solutions:**
   In some cases, the problem can be reconsidered, and new alternative solutions may arise.

Ethical Dilemmas in Business

Ethical dilemmas are especially significant in professional life, as they frequently occur in the workplace.

Some companies and professional organizations (e.g., CFA) adhere to their own codes of conduct and ethical standards.

★ Business Ethics

Business ethics are the moral principles that guide how a business behaves and conducts its transactions.

Ethics in CSSL code of ethics

1. Professionalism
2. Professional Development
3. Added Value to Sri Lanka
4. Honesty
5. Competence

Software Engineering Code of Ethics and Professional Practice (IEEE)

➔ PUBLIC
➔ CLIENT AND EMPLOYER
➔ PRODUCT
➔ JUDGMENT
➔ MANAGEMENT
➔ PROFESSION
➔ COLLEAGUES
➔ SELF

★ What Is the Digital Divide?

The digital divide is the gap between those who have access to modern technology and those who don't, affecting different demographic groups and regions.

This can include inequalities in access to computers, smartphones, the Internet, or digital literacy.

★ Reasons for Digital Divide

1. Inequalities in internet access for socio economic reasons.
2. Geographical differences in internet speed and access.
3. Unequal access to 4G/5G networks for mobile internet
4. Unequal access to computers/mobile devices
5. Gaps in digital literacy, due to generation and/or education gaps.

★ Consequences of the Digital Divide

1. **Lack of communication and isolation**

   The COVID-19 pandemic has brought into sharp focus the isolation that people without internet access or skills can quickly experience. This can have serious concomitant effects—from not being able to secure appointments for vaccination against the coronavirus to limiting individuals' job prospects and affecting their mental health.

2. **Barriers to education**

   As education is increasingly delivered online, those without the resources to access the internet, including schoolchildren limited to remote learning during the pandemic, can be cut off from opportunities to develop their skills. As a result, children may have educational gaps, and adults may miss out on job opportunities or be unable to gain the basic skills necessary to contribute to their community.

★ **These disparities stem from barriers in three areas:** availability, affordability,and adoption

1. **Availability:** Ensure access to online services through options like wireless data, broadband, and fiber.

2. **Affordability:** Make sure people can afford devices and ongoing service costs to stay connected.

3. **Adoption:** people are prevented from utilizing the internet by knowledge hurdles, such as a lack of digital literacy or educational constraints.

★ **Stakeholders**

Stakeholders are individuals or groups with an interest in the success of a business.

★ **Stakeholders can range from**

1. Owners
2. employees
3. investors,
4. suppliers
5. government agencies, and the local community

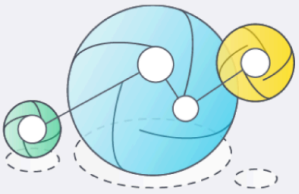
★ **Shareholder vs. stakeholder**

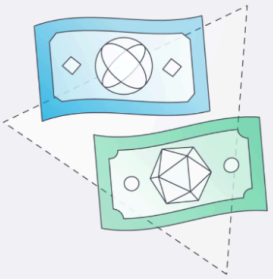
Shareholders are individuals or entities that own shares in a public company.
They have a claim to part of the company's profits and can vote on decisions the company makes.

Example - An investor owning Apple stock

Business stakeholders are a broader group. They include anyone affected by the company's operations and decisions.
This includes employees, customers, suppliers, community members and shareholders.

Example - Apple employees, customers, suppliers, local communities





STAKEHOLDERS	SHAREHOLDERS
Have an interest in the business but don't necessarily own it	Partly own the business through shares of stock
May be affected, directly or indirectly, by the company's activities	Directly affected by the company's financial performance
Found in all types of organizations	Found only in companies issuing shares
Primary focus on the company's performance	Mainly focus on ROI
Stakeholders but not necessarily shareholders	Always classified as stakeholders

★ Why are stakeholders important?

1. **Operational efficiency:** internal stakeholders like employees and managers directly influence the daily operations of a company through decision-making and performing their duties well.
2. **Customer relations:** positive interactions with customers impact customer loyalty and influence revenue.
3. **Supply chain management:** suppliers and vendors affect the reliability and quality of products the company needs to fulfill their customers' demands.
4. **Feedback and innovation:** regular feedback from various stakeholders can lead to improvements and innovations in products, services and processes.

★ Types of stakeholders in a business or organization Internal stakeholders

1. Employees
2. Management
3. Executives
4. HR department
5. Union representatives

★ External stakeholders

1. Customers
2. Suppliers / vendors
3. Investors
4. Government agencies (regulatory bodies)
5. Local communities
6. Media outlets
7. Industry associations

★ How to manage stakeholders in the workplace

1. **Regularly update stakeholders**
   Regularly update stakeholders to maintain their trust and support.
2. **Involve stakeholders**
   Involve stakeholders in decision-making to ensure they feel heard and engaged.
3. **Be responsive to stakeholder feedback**
   Be responsive to feedback and adapt strategies to show their input is valued.

★ Potential Challenges to Stakeholder Management at Work

1. **Communication Breakdown**

   - Leads to missed milestones, growing issues, and confusion.
   - Clear and consistent communication is essential to keep everyone engaged and aligned.

2. **Clashing Priorities**

   - Stakeholders may have conflicting goals.
   - Requires skillful negotiation to find common ground and align interests with project objectives.

3. **Power Imbalances**

   - Senior stakeholders can influence project direction and cause delays.
   - Identifying potential delays early can aid in project planning.

4. **Resistance to Change**

   - Some stakeholders may resist project-related changes due to fear or comfort with the status quo.
   - Addressing these fears and offering support can ease the transition.

5. **Lack of Equal Effort**

   - Unequal contribution from stakeholders can cause resentment.
   - Ensuring fair participation is key to maintaining harmony and project success.

ACTS

Electronic Transaction Act No. 19 of 2006 (As amended) (ETA).

The Electronic Transactions Act No. 19 of 2006 is based on the standards established by UNCITRAL Model Law on Electronic Commerce (1996) and Model Law on Electronic Signatures (2001).

The Act applies to all business and commercial transactions that are electronic in nature, other than those specific areas that have been excluded by the Act.

The Electronic Transaction Act has the following objectives –

1. Facilitate domestic and international electronic commerce by removing legal barriers and ensuring legal certainty.

2. Encourage the use of reliable electronic commerce methods.

3. Enable electronic filing with the government and enhance efficient government service delivery through reliable electronic communications.

4. Boost public confidence in the authenticity, integrity, and reliability of electronic data and communications.

Computer Crime Act No. 24 of 2007 (CCA).

The Computer Crime Act No. 24 of 2007 (CCA) was enacted to identify and prevent computer crimes, and outline procedures for investigation.

Although the CCA does not explicitly address e-contracts, some provisions can enhance their security.

For instance, unauthorized disclosure of information is considered an offense.

Additionally, section 8 of the CCA addresses illegal interception of data, a crime first recognized under the Telecommunication Act of 1996.

The CCA helps protect users' privacy and data in electronic transactions, but it is criticized for not fully addressing modern cyber threats.

Sri Lanka is currently working on a new Data Protection bill, as no comprehensive data protection laws exist yet.

UNCITRAL model law on E-Commerce (1996).

The UNCITRAL Model Law on Electronic Commerce, endorsed by the UN General Assembly in December 1996, aims to standardize rules for e-commerce globally. electronic commerce. The Model Law has been divided into two parts. It includes:

- Part I: it addresses the three principles of nondiscrimination, technological neutrality, and functional equivalence.
- Part II: Specific provisions for e-commerce in areas like the carriage of goods.

Intellectual Property Act No. 36 of 2003

To safeguard intellectual creations (Copyrights, Patents, Trademarks etc.) including software and Information systems.

The Payment And Settlement Systems Act, No. 28 of 2005 ensures oversight of payment, clearing, and settlement systems, regulates money service providers, and promotes electronic cheque processing.