

# Accounting Information Systems and the Accountant

- Introduction
- Accounting Information Systems (AIS)
- New Features in AIS
- Accounting and IT
- Careers in Accounting Information Systems
- AIS at work - Planning for disaster
- Summary

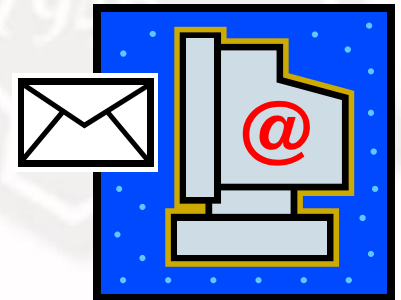


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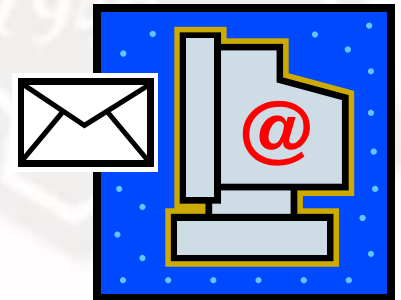
# Introduction

- Application of information technology (IT) to accounting systems
  - financial accounting,
  - managerial accounting,
  - auditing,
  - taxation, and
- Study of accounting information systems for understanding
  - business processes,
  - computerized software, and
  - information flows that are all part of AIS.



# Introduction

- Increase in career opportunities with
  - minimum level of computer proficiency
  - accounting skills combined with computer knowledge
  - advanced computer skills in accounting jobs
  - awareness of new developments in the field.

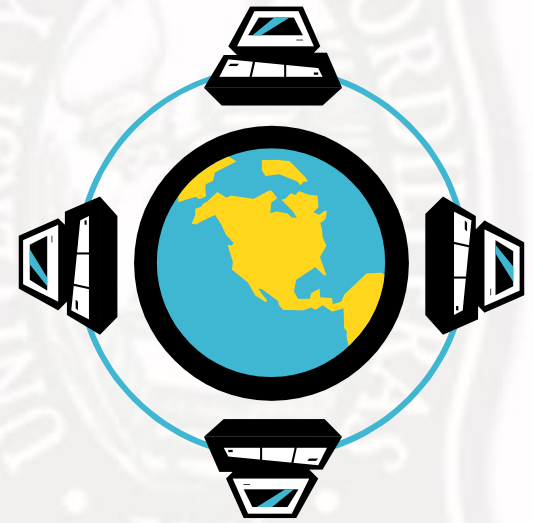


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# The Information Age

- Information in this age is
  - produced very quickly,
  - analyzed efficiently, and
  - distributed effectively.
- Knowledge workers
  - constitute the labor force in this age.
- The Internet
  - is a major contributor in the information age.



# Information Systems(IS)

- **A System**
  - consists of interacting parts or components,
  - is set up to achieve one or more goals.
- **An Information System**
  - is a set of interrelated subsystems,
  - works to collect, process, store, transform, and distribute information,
  - helps to plan, make decisions, and control processes.
- **A Firm/Company**
  - depends on information systems to stay competitive.

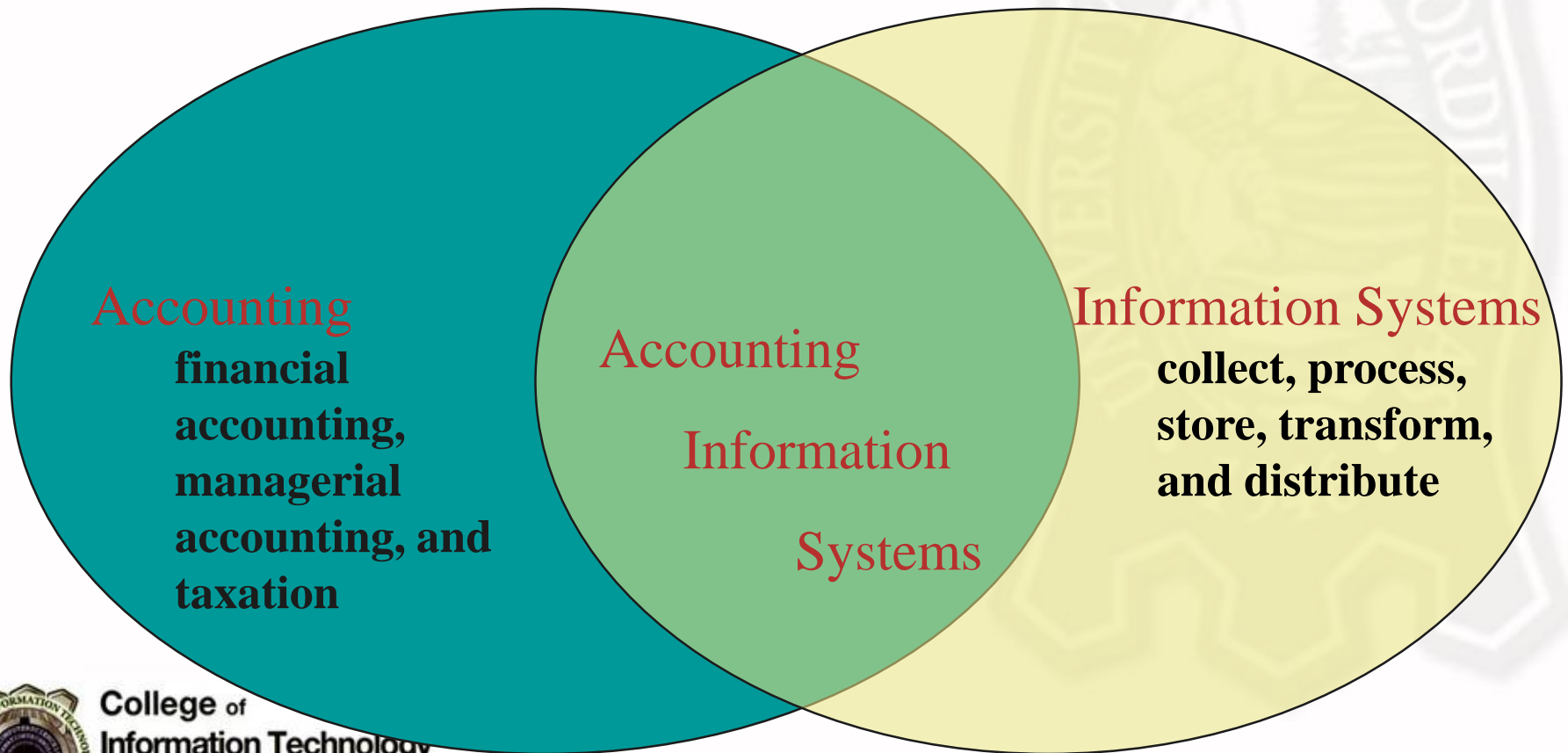


# The Accounting Field

- The Accounting Field includes
  - financial accounting,
  - managerial accounting, and
  - taxation
- The Accounting System of old is the
  - Management Information System (MIS)  
which provided
    - financial information and
    - nonfinancial information



# AIS: At the Intersection of Accounting and IS



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# Accounting Information Systems

- An Accounting Information System (AIS)
  - Collection of data and processing procedures
  - Creates needed information for users.
- The AIS today should be
  - an *enterprise-wide information system*,
  - focused on business processes.

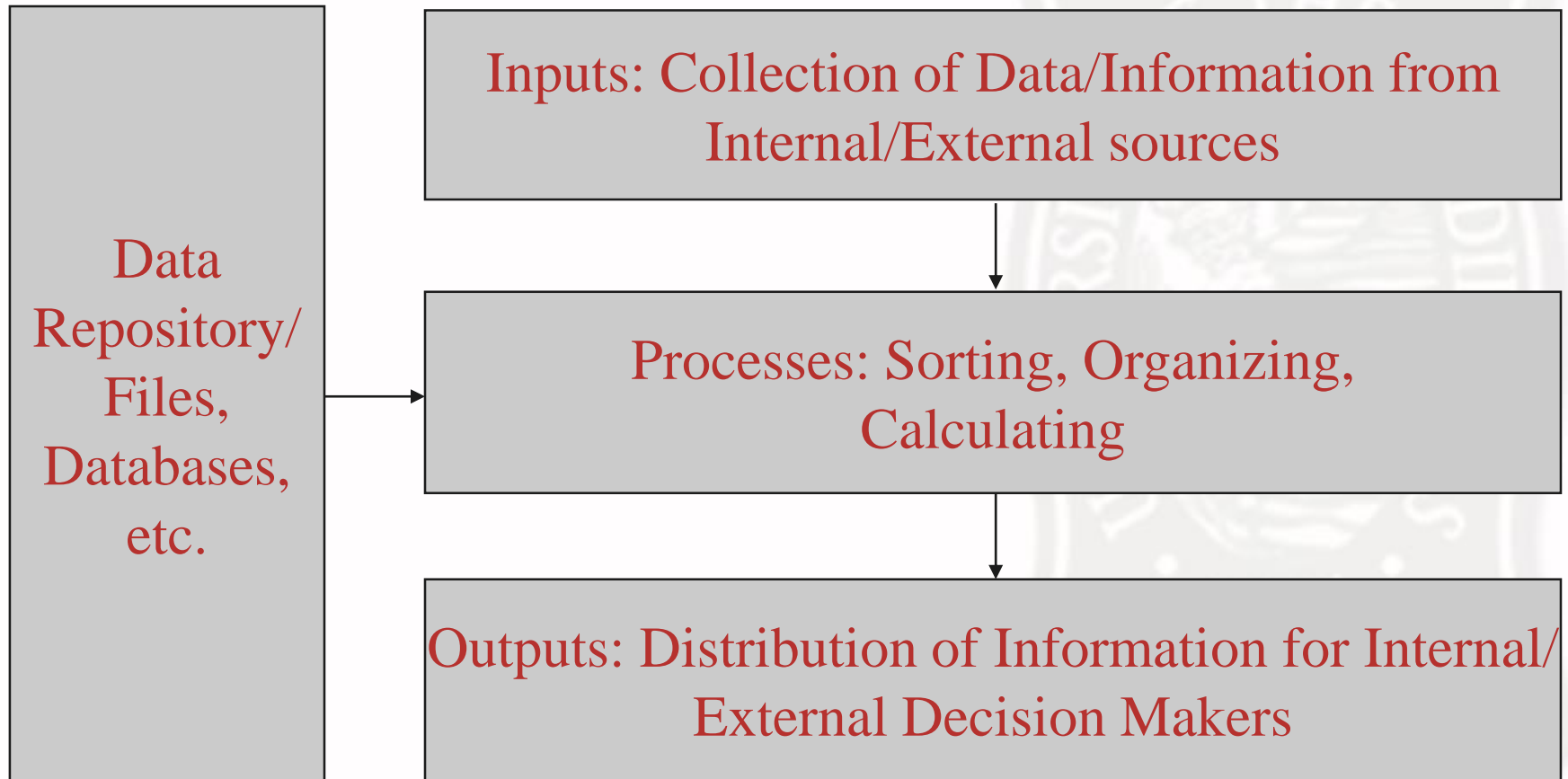




# Accounting Information Systems

- AIS don't just support accounting and finance business processes. They often create information that is useful to non-Accountants.

# An Accounting Information System



# An Accounting Information System

## AIS for non-accounting functions of a business

- **Finance:** cash forecasts and actual payment and receipt information
- **Marketing:** Sales, summary analyses, cost information, and sales forecasts
- **Human Resources:** payroll analyses( including employee benefit information) and projections of future personnel costs
- **Production:** inventory summaries and product cost analyses



# An Accounting Information System

## Question

Which of the following is NOT true about accounting information systems (AISs)?

- a. All AISs are computerized.
- b. AISs may report both financial and nonfinancial information.
- c. AISs, in addition to collecting and distributing large amounts of data and information, also organize and store data for future uses.
- d. A student who has an interest in both accounting and IT will find many job opportunities that combine these knowledge and skills areas.

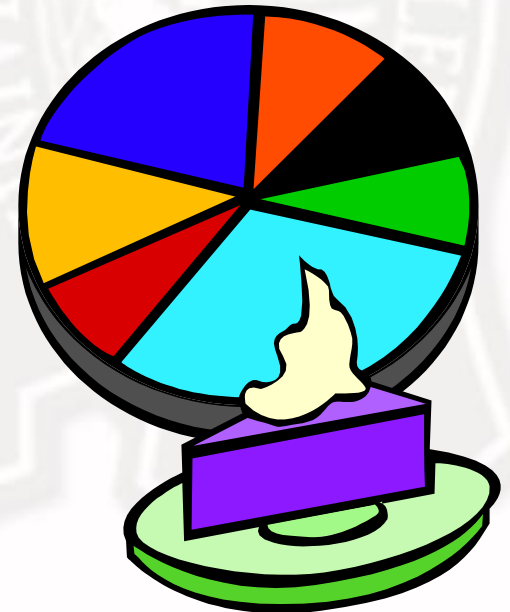
# Data versus Information

- **Data**

raw facts about events that have no organization or meaning

- **Information**

data that have been processed and made meaningful to users



# MIS versus AIS

- **A Management Information System provides to internal users (management)**
  - financial information and
  - nonfinancial information.



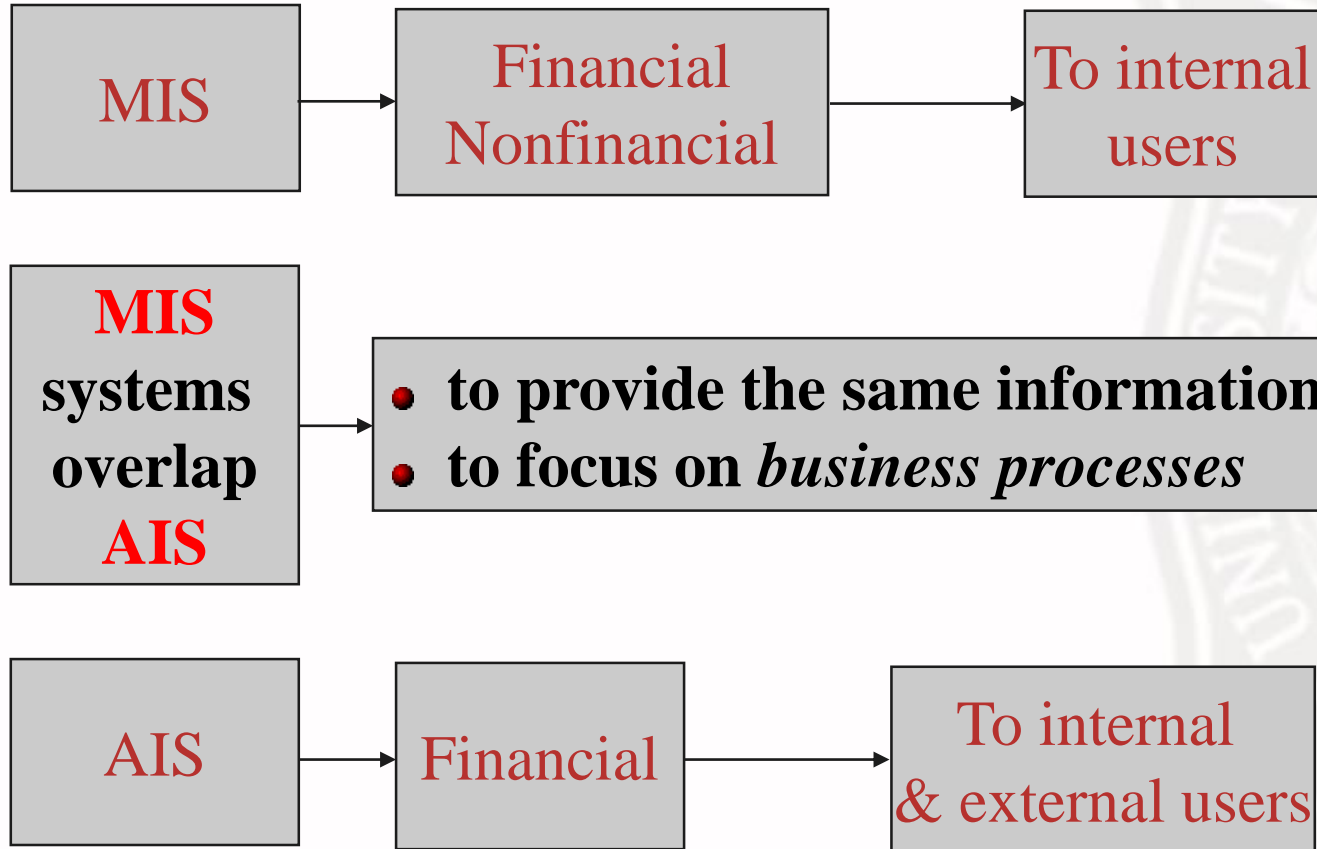
# MIS versus AIS

- **The Accounting Information System provides to both external and internal users**
  - financial information
- **Now, the two systems overlap to provide the same information focusing on *business processes*.**





# MIS versus AIS



# MIS versus AIS

## Question

**With respect to computerized AISs, computers:**

- a. Turn data into information in all cases.**
- b. Make audit trails easier to follow.**
- c. Cannot catch mistakes as well as humans.**
- d. Do not generally process information more quickly than humans.**



# Accounting in the Information Age

- Financial Accounting
- Managerial Accounting
- Auditing
- Taxation



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# New Features in AIS

AIS has several new applications today:

- In countering terrorism AIS is using banking systems to trace the flow of funds and materials across international borders.
- In preventing accounting scandals AIS is helping firms to comply with the Sarbanes-Oxley Act of 2002.

AIS has benefited from the use of

- WI-FI Technology

# Recent Accounting Scandals

The following is a list of recent accounting scandals that were reported:

- Enron 2001
- Imclone 2001
- Arthur Andersen 2001
- Merrill Lynch 2002
- Tyco 2002
- Adelphia 2002
- Global Crossing 2002
- Parmalat 2003
- NYSE 2003
- WorldCom 2003
- HealthSouth 2003

# The Sarbanes-Oxley Act of 2002

## Sarbanes-Oxley Act of 2002

- is a strong deterrent to unethical behavior;
- forbids corporations from making personal loans to executives;
- requires CEOs of companies to personally vouch for the accuracy and completeness of its financial statements;
- requires public companies to hire independent, *new* auditors to review internal controls;
- requires management to implement and assess internal controls;
- has created a lot of work for accountants and information systems auditors.

# The Sarbanes-Oxley Act of 2002

## Question

Which of the following is *not* true of The Sarbanes-Oxley Act of 2002?

- a. Was enacted as a response to the corporate frauds that left investors uncertain about U.S. financial markets.
- b. Has lead to a decrease in the amount of work done by auditors and accountants.
- c. Forbids corporations from making personal loans to executives.
- d. Requires the Chief Executive Officer of a public company to take responsibility for the reliability of its financial statements.

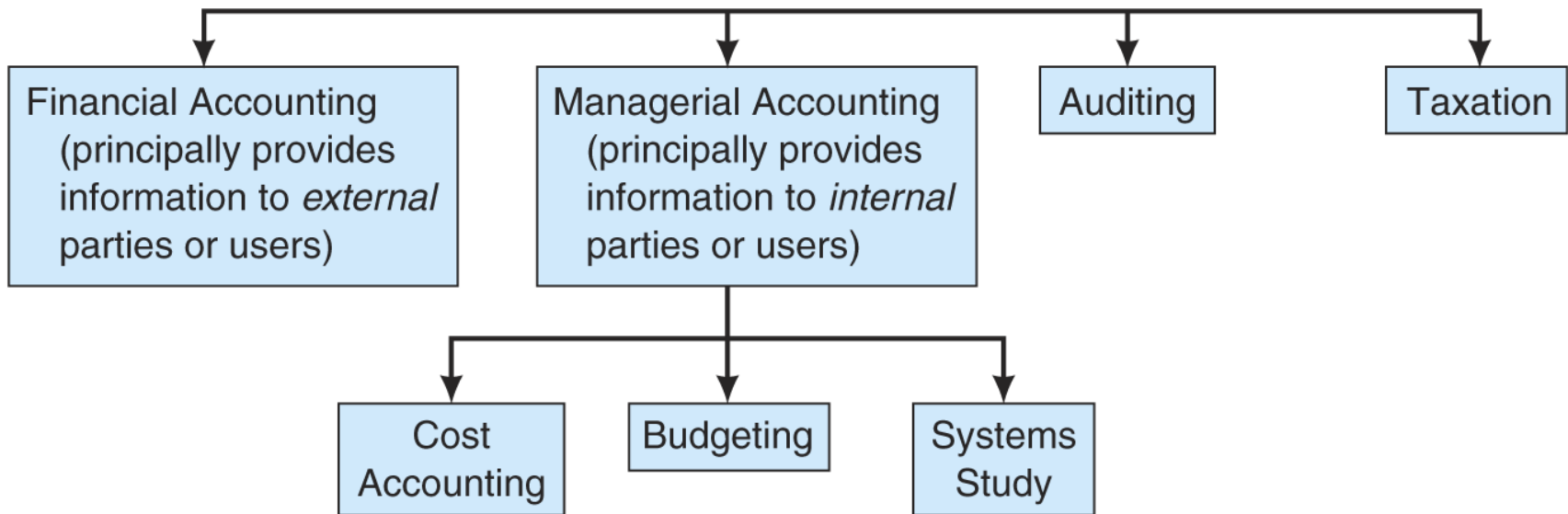


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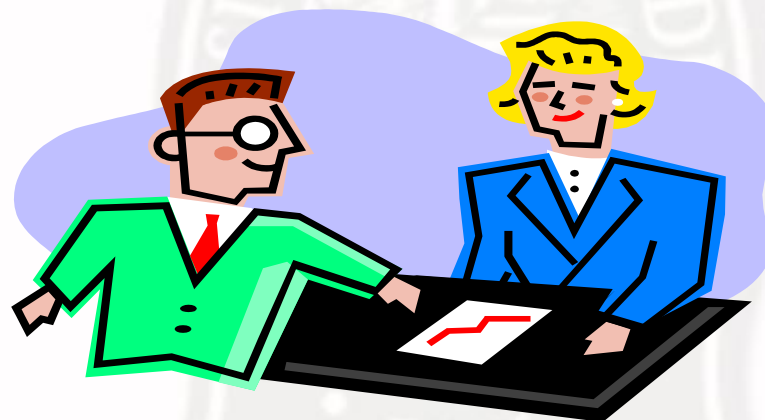


# Accounting and IT



# Financial Accounting

- The objective of financial accounting is
  - to provide relevant information to individuals and groups *outside* an organization's boundaries.
- The users include
  - investors,
  - tax agencies, and
  - creditors.
- The objectives are achieved through
  - preparation of financial statements.



# Financial Accounting

- **Inputs**

- transactions are measured in monetary units.

- **A good audit trail**

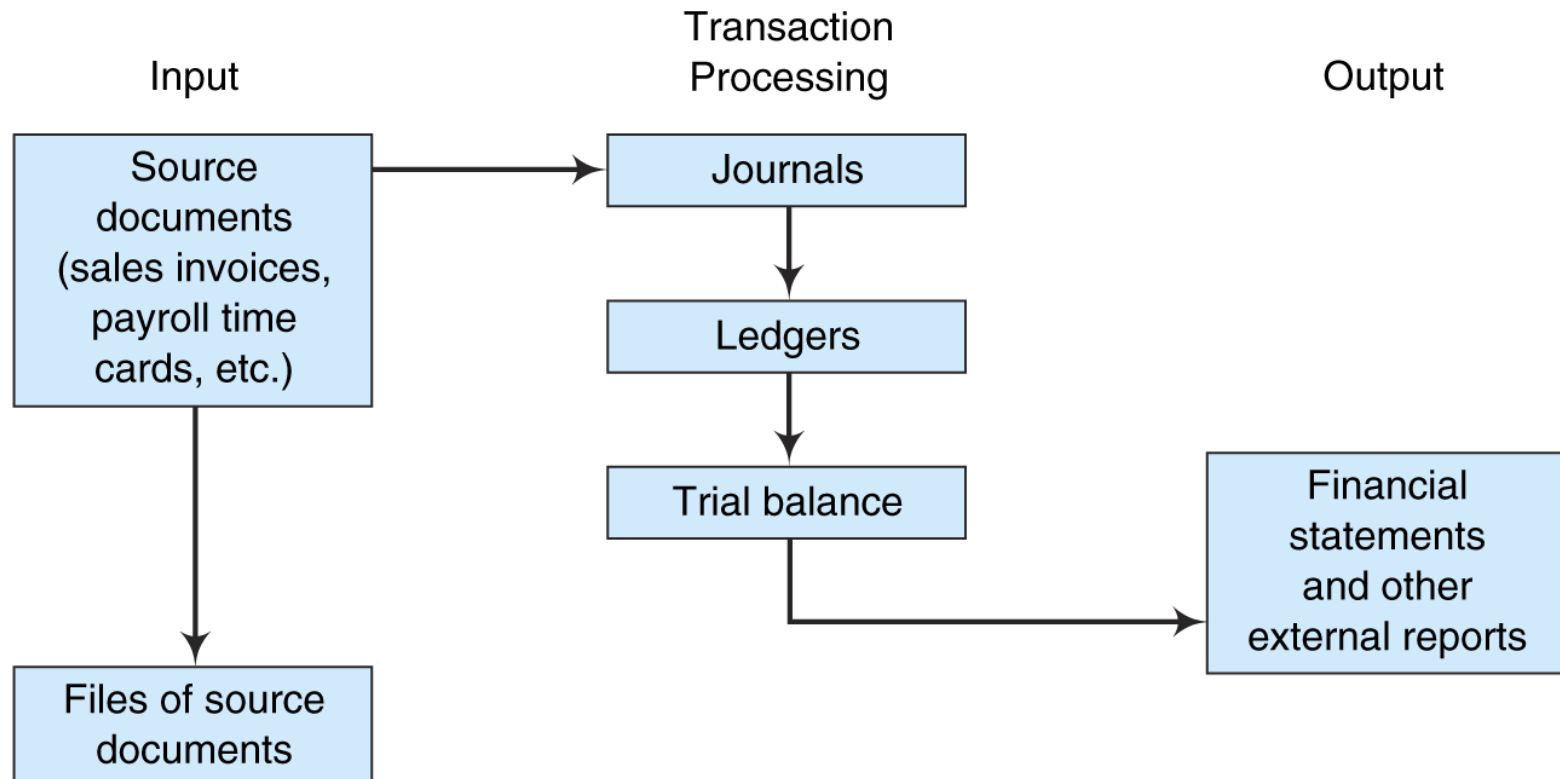
- information users can follow the flow of data through the system
- managers can follow source document data from input through processing to the output (& vice versa)

- **The accounting cycle**

- parallels the audit trail
- begins with a transaction
- ends with producing financial statements and closing temporary accounts.



# A Financial Accounting Audit Trail



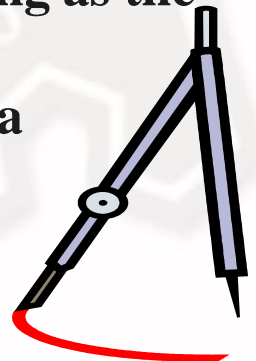
# Financial AIS - Criticisms & Solutions

## Criticism

- Did not provide nonfinancial data
- Financial statements are periodic. Too much aggregation of information
- Data is not interactive - data used in one application are not easily transferable to another

## Solutions

- Recommended disclosure of non-financial performance measures.
- Reporting of disaggregated information tracks sales and many of its expenses continually
- Extensible business reporting language (XBRL) is emerging as the language of choice for interactive data



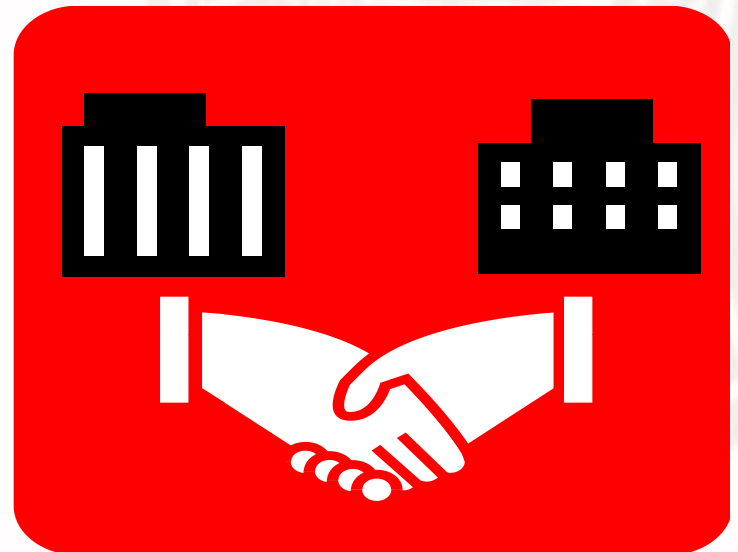
# Managerial Accounting

- **Objective:**

- to provide relevant information to *internal parties* (or users).

- **Components:**

- Cost Accounting
- Budgeting



# **Managerial Accounting - Features**

## **Managerial Accounting**

- focuses on accounting information
  - for internal parties, such as management,
  - not for external investors and creditors.
- is mostly forward-looking.
- is not regulated by generally accepted accounting principles, nor is mandatory to prepare.





# Managerial Accounting - Features

- includes both nonmonetary and financial data.
- is influenced by many business and nonbusiness disciplines, such as economics, behavioral science, quantitative methods
- is flexible and frequently involves nonroutine reporting.



# Cost Accounting

**Cost accounting assists managers in the organization's measuring and controlling the costs associated with:**

- **acquisitions**
- **processing**
- **distribution**
- **selling activities.**



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# Cost Accounting

**Activity-based costing systems assign**

- **overhead to products based on cost drivers.**

**Corporate performance measurement**

- **Identifies unfavorable performance**
- **Traces to the department or individual responsible for the inefficiencies.**
- **Allows management to take immediate corrective action.**



# Cost Accounting

The Balance Scorecard approach uses performance measurements in:

- financial performance
- customer knowledge
- internal business processes
- learning and growth



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# Budgeting

- Definition

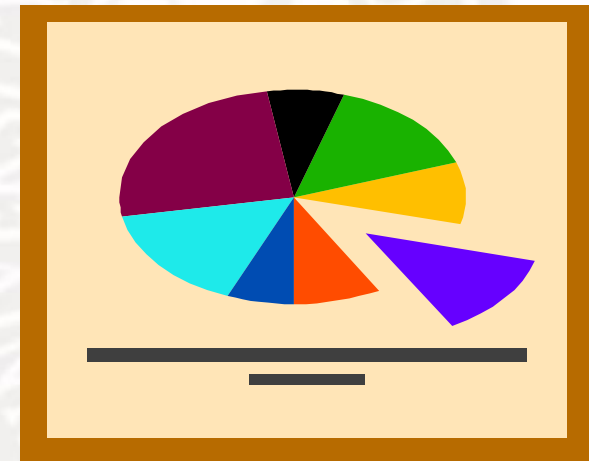
- a financial projection for the future and valuable managerial *planning* aid

- Useful

- for *managerial control* and to compare actual results to budgeted results.

- Influence

- on all the subsystems within an organization.



# Auditing

- **Traditional role**
  - to evaluate the accuracy and completeness of a corporation's financial statements
- **Present role**
  - in the assurance business; the business of providing third-party testimony that a client complies with a given statute, law, or similar requirement



# Auditing

- **CPA *Trust Services***

- include online privacy evaluations, security audits, testing the integrity of information processing systems
- assessing availability of IT services, and systems confidentiality testing.



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# **Assurance Services identified by the AICPA Special Committee**

- **Risk Assessment**

- Provide assurance that an organization's set of business risks is comprehensive and manageable.

- **Business Performance Measurement**

- Provide assurance that an organization's performance measures beyond the traditional measures in financial statements are relevant and reasonable for helping the organization to achieve its goals and objectives.

- **Information Systems Reliability**

- Provide assurance that an organization's system has been designed to provide reliable information for decision making



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# Assurance Services identified by the AICPA Special Committee

- **Electronic Commerce**

- Provide assurance that an organization's doing business on the internet can be trusted to provide the goods and services they promise, and that there is a measure of security provided to customers.

- **Health Care Performance Measurement**

- Provide assurance to health care recipients about the effectiveness of health care offered by a variety of health care providers.

- **Eldercare Plus**

- Provide assurance that various caregivers offering services to the elderly are offering appropriate and high-quality services.



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# Taxation

## Taxation software

- are examples of AISs
- enable users to create and store copies of trial tax returns
- help examine consequences of alternate tax strategies
- print specific portions of a return
- transmit completed copies of a tax return to the appropriate government agency



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# Taxation

**Professionals can use taxation software**

- **to access electronic tax libraries on CDs or online**
- **to research challenging tax questions**
- **to get more up-to-date tax information**
- **access databases of federal and state tax laws, tax court rulings, court decisions, and technical advice.**



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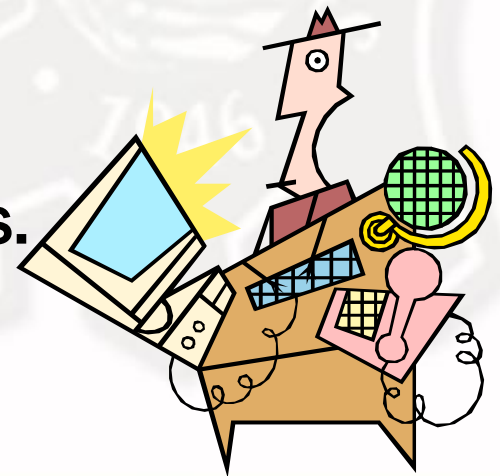
# Careers in Accounting Information Systems

## Systems consultants

- provide help with information systems in
  - Designing information systems,
  - selecting hardware and software, or
  - reengineering business processes.

## Value-added resellers (VARs)

- sell a certain software program and
- provide consulting services to companies.



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# Careers in Accounting Information Systems

## Information systems auditors

- analyze risks associated with computerized information systems
- can show organizations ways that their computer systems could be penetrated
- can be licensed as Certified Information Systems Auditors (CISA)
- can obtain the certification from the Information Systems Audit and Control Association (ISACA)



# Planning for Disaster

- Planning assures that operations continue after disaster
- IT particularly vulnerable to man-made attacks, such as viruses and worms
- Under auditing standard No. 60, absence of disaster plan needs to be reported.
- Plan needs to be tested regularly.