CHAPTER 3

Systems Development and Documentation Techniques

INTRODUCTION

Questions to be addressed in this chapter include:
- What is the purpose of documentation?
- Why do accountants need to understand documentation?
- What documentation techniques are used in accounting systems?
- What are data flow diagrams and flowcharts?
  - How are they alike and different?
  - How are they prepared?

INTRODUCTION

How do accountants use documentation?
- At a minimum, they have to read documentation to understand how a system works.
- They may need to evaluate the strengths and weaknesses of an entity’s internal controls.
  - Requires heavy reliance on documentation
- They may prepare documentation to determine if a proposed system meets the needs of its users.
- They may prepare documentation to:
  - Demonstrate how a proposed system would work
  - Demonstrate their understanding of a system of internal controls

INTRODUCTION

In this chapter, we discuss two of the most common documentation tools:
- Data flow diagrams
- Flowcharts
  - Include three types:
    - Document flowcharts describe the flow of documents and information between departments or units.
    - System flowcharts describe the relationship between inputs, processing, and outputs for a system.
    - Program flowcharts describe the sequence of logical operations performed in a computer program.

INTRODUCTION

Documentation techniques are necessary tools for accountants:
- SAS-94 requires that auditors understand the automated and manual procedures an entity uses.
  - This understanding can be gleaned through documenting the internal control system—a process that effectively exposes strengths and weaknesses of the system.
- SOX (2002) effectively requires that publicly-traded corporations and their auditors document and test the company’s internal controls.
- Auditing Standard No. 2 promulgated by the PCAOB requires that the external auditor express an opinion on the client’s system of internal controls.

DATA FLOW DIAGRAMS

A data flow diagram consists of four basic elements:
- Data sources and destinations
- Data flows
- Transformation processes
- Data stores
DATA FLOW DIAGRAMS

- Example of a data flow diagram of the customer payment process from Figure 3-3 in your textbook.

Customer payment → 1.0 Process Payment
- Remittance data → 2.0 Update A/R
  - Accounts Receivable
  - Credit Manager
  - Bank

- This is the context diagram for the S&S payroll processing system (Figure 3-5 in your textbook).

DATA FLOW DIAGRAMS

Payroll Processing System
- New employee form
- Employee change form
- Time cards
- Tax report & payment
- Employee checks
- Payroll report
- Payroll check
- Payroll disbursement data
- Payroll tax disb. voucher
- Govt. Agencies
- Employees
- Bank
- Management

- This diagram shows the next level of detail for the context diagram in Figure 3-5.

DOCUMENT FLOWCHARTS

- A document flowchart shows the flow of documents and information among areas of responsibility in an organization.

- These flowcharts trace a document from cradle to grave and show:
  - Where a document comes from
  - Where it's distributed
  - How it's used
  - Its ultimate disposition
  - Everything that happens as it flows through the system

This is part of the document flowchart from Figure 3-9 in your textbook.