



Systems Understanding Aid

10th Edition
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Instructions & Flowcharts

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NATURE OF THIS SYSTEMS PROJECT

A simple accounting and internal control system for a wholesaling business named Waren Sports Supply has been designed. Transactions and the accompanying record keeping have been completed through December 15, 2022. You will be given transactions that occur during the period of December 16 through December 31 and you will be required to complete the documents, perform certain internal controls, and do the record keeping and other accounting necessary for the last semimonthly period of the year. You will be provided specific instructions as to when and how to do each requirement.

The requirements include preparation of adjusting and closing entries, annual financial statements, a December bank reconciliation, and various other information schedules. Because the primary purpose of this *Aid* is to demonstrate financial accounting information flow, only a small number of transactions have been included to keep the recording of detail to a minimum.

PREPARATION

The following advance preparation will familiarize you with the overall project. This preparation will significantly simplify your effort and insure a better solution. **Do not begin recording any transactions until you have completed each preparation step.**

1. Read pages 3 through 17 of this Instructions & Flowcharts book carefully. Knowing this material is essential to doing the project. Review the remaining pages of flowcharts so you know the location of each item. You will need to refer to them often during the project.
2. Scan through the *Systems Understanding Aid* Reference book. Note its content so you can use it subsequently as a reference guide.
3. Briefly leaf through all other materials in the *Systems Understanding Aid* package to make sure you know the purpose and location of each item. Page 17 in this book (Key to Documents, Journals, and Ledgers) will help you locate all of the materials for this project.
4. Review flowcharting in Chapter 2 of the *Systems Understanding Aid* Reference book. Pay particular attention to the flowcharting symbols in Figure 2-1. All symbols used in the project are explained there.
5. Study the flowcharts on pages 18 through 24 of this Instructions & Flowcharts book to learn Waren Sports Supply's accounting system. Refer to the flowcharts subsequently for proper systems procedures in handling transactions. Follow the flowchart steps precisely.

After completing these five steps, start recording transactions following the instructions under Section III Requirements, page 10 of this book.

I. INTRODUCTION

OBJECTIVES

Careful completion of the *Systems Understanding Aid* will make you more knowledgeable about several aspects of accounting systems. This knowledge is intended to aid you in the study of auditing, financial accounting, information systems and as an accounting and auditing practitioner. The lack of understanding of documents, records, and systems procedures is frequently a major deterrent to understanding financial accounting and auditing.

The following are the objectives that should be accomplished by doing the *Aid*:

- Help you become knowledgeable with the form and function of the most important journals, ledgers, documents, and records used by enterprises in their accounting systems to conduct and to record the results of business activities.
- Improve your reading and interpretation of accounting systems flowcharts.
- Help you learn about basic internal control concepts.
- Increase your understanding of the documentation, flow, and control of financial information from its initiation at the business document and transaction level to its summarization in the financial statements.
- Enhance your understanding of accounting systems for better comprehension and evaluation of audit tests designed to assess the fairness of financial statements prepared from the financial data.

The *Systems Understanding Aid* is intended as a supplemental exercise in your accounting course that will help you understand financial accounting systems and reinforce your study of processing transactions. The accounting problems have been designed to help accomplish the above stated objectives, but are kept as straightforward as possible for the sake of efficiency.

BENEFITS OF STUDYING A MANUAL SYSTEM

Even though businesses now use computerized accounting systems rather than manual ones, the processes followed in both types of systems are similar. The advantage of learning by using a manual system is the greater depth of understanding gained by going through each step in the documentation and recording functions. Although computers perform most of those steps internally, accountants must understand the procedures. In addition, most of the business documents and records are similar whether in hard copy or electronic format.

Because you manually prepare the documents and financial information for Waren's system, you are able to observe the paths of information flow that are unobservable in computerized systems. These concepts of information flow then transfer easily to computerized systems where the processes you have done manually are automated. The information flow and control objectives are the same in manual and computerized systems. Only the tools and methods for accomplishing these objectives are different.

MATERIALS

There are six related components in the *Systems Understanding Aid*:

1. Reference book
2. Instructions & Flowcharts book
3. Ledgers book
4. Journals book
5. Documents folder with business documents
6. File tabs

BUSINESS DOCUMENTS

Realistic business documents purchased by the publisher from a company that produces business forms are provided for you to complete and use in documenting and recording accounting transactions for the period of December 16 through December 31. The purpose of using realistic documents is to maximize your learning of true business practices. At least one example of most business documents used by accountants has been included in the *Aid* to demonstrate the form, content, and use of such documents in the accounting process. An index of the business documents included in the *Aid* is shown on the front cover of the documents folder and on page 17 of this book. Each document has the document number printed in its top right corner.

The documents folder includes all documents used to process transactions and complete the accounting and systems requirements of the project. You should remove a document only when you use it.

The file includes three types of documents:

- blank documents that you will complete and file as you process related transactions.
- documents that have already been partially or completely prepared.
- documents used to provide information for processing and recording transactions (chart of accounts, price lists, and transactions list).

After removing a document from the file and completing the stated requirements, you will file it behind one of the five tab files included in the *SUA* envelope. **Do not remove the five tab files from the envelope.** The following describes where you should file each document, including copies of multi-part documents.

File Tab Description

Temporary

Description of Contents

Documents that will be used later. The filing symbol in the flowcharts [∇] will include the letter "T" for documents to be included in this file. Examples include approved purchase orders for goods not yet received, and approved but unpaid vendor invoices and all attached documents.

(continued on the following page)

INTRODUCTION & WAREN'S ACCOUNTING SYSTEM AND POLICIES

File Tab Description

Mailed/Given to Outsiders

Description of Contents

Documents that are either mailed or given to outsiders. Examples are vendor copies of purchase orders, customer copies of sales invoices, copies of bills of lading given to shippers, deposit slips and endorsed checks deposited into the bank.

Shipping/Banking

Shipping or banking documents that are completed and ready for permanent filing. Examples include shipping copies of sales invoices, loan documents, completed bank reconciliations, bank statements, cash receipts prelists, and validated deposit receipts.

Accounting

Documents in the accounting department that are completed and ready for permanent filing. Examples include accounting copies of sales invoices and credit memos, paid vendors' invoices and all attached documents, and completed time record reports.

Journals/Ledgers Books

Journals book and Ledgers book.

Note: Three documents that you will use frequently are the transactions list (Doc. No. 1), the chart of accounts (Doc. No. 2), and the price lists (Doc. No. 3). These documents are the first three located in the documents folder and should be kept for easy access and use throughout the project. When the project is completed, they should remain in the documents folder.

II. WAREN'S ACCOUNTING SYSTEM AND POLICIES

BUSINESS

Waren Sports Supply is a distributor of sporting goods to colleges and universities in the Midwest. The operation of this distributorship is Waren's main source of revenue. Waren is organized as a commercial corporation and is operated by a salaried manager and two hourly employees.

PERSONNEL STRUCTURE AND RESPONSIBILITIES

The accounting system of Waren Sports Supply is described by the flowcharts on pages 18 through 24. The flowcharts incorporate the responsibilities of Waren personnel as well as the various internal controls existing in the accounting system. **You should study these flowcharts and follow them in your preparation of this Systems Understanding Aid.** Waren's three employees are: *(see the following page)*

Ray Kramer – *salaried manager*

makes cash deposits, does bank reconciliations, signs checks and ACH payment authorization forms, and performs other approvals (general journal entries, time record reports, purchase orders, credit sales, etc.)

Jim Adams – *hourly employee*

receives and prelists cash, prepares credit memos, keeps payroll records, prepares checks and ACH payment authorization forms, and prepares all journals and subsidiary ledgers

Nancy Ford – *hourly employee*

prepares purchase orders and sales invoices, ships and receives goods, prepares shipping and receiving documents, and verifies cash receipts

CHART OF ACCOUNTS

All journals and the general ledger use the general ledger *chart of accounts* developed by Kramer. The *chart of accounts* is Document No. 2 in the *Systems Understanding Aid* package. Not all of the general ledger accounts that are in the chart of accounts are used in the project. A company can have an exhaustive chart of accounts and not necessarily have a transaction of every type each year.

PRODUCT SELLING PRICES AND COSTS

All merchandise is purchased from one supplier, Velocity Sporting Goods, at a fixed catalog cost. Selling prices are set by Kramer and are the same for all customers. The product selling prices and costs are included on the *approved price list* (Doc. No. 3). All supplies are also purchased from one supplier, Chicago Office Supply, at a fixed catalog cost. The costs of supplies are also included on the *approved price list*.

CREDIT TERMS

Waren requires most of its customers to prepay for goods ordered. For these cash sales, the customer sends a *check* or an electronic payment with its *purchase order* and Waren ships the merchandise. All trade discounts are already factored into the sales *price list*. Only a few favored customers with long-standing relationships with Waren and who buy in larger quantities are granted credit. These favored customers are also granted an additional cash discount for early payment.

Customers: 2/10, Net 30

Also, Waren receives a similar cash discount from one of its vendors, but not the others.

Vendors: Velocity Sporting Goods – 2/10, Net 30

Chicago Office Supply – Due on receipt of invoice (If cash is available, Waren usually pays within five days, but usually not on the same day as the receipt of the invoice.)

Gillett Consulting – Net 30

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WAREN'S ACCOUNTING SYSTEM AND POLICIES

SALES TAX

According to Illinois state law, no sales taxes apply to wholesale sales. Waren Sports Supply makes only wholesale sales.

INVENTORY PROCEDURES

Waren's normal procedure is to take a physical inventory of merchandise on hand at the end of each quarter. Because Waren uses the periodic method of valuing inventories, no accounting entries are made for cost-of-goods-sold and inventory until the balance sheet date.

PAYROLL

Payroll is calculated and paid semimonthly. In keeping with the holiday season, Waren awards pay raises during the December holidays and makes them effective for the last semimonthly pay period of each year. Waren's hourly employees are allowed a flex-time work schedule as long as Waren's business requirements permit it. For each day in which they work at least seven hours, they are paid for their lunch break and do not have to punch the time clock when they take it. Overtime pay of 1.5 times the regular hourly pay rate is paid for all hours exceeding "base period hours." The base period hours are determined by multiplying eight hours by the number of business days (Monday-Friday) in the semimonthly pay period. Employees are paid eight hours of regular time for the December 25 holiday and it counts in their base period hours. If the December 25 holiday falls on a weekend, the holiday hours are paid for the next business day.

Federal, state, and city income tax withholdings are normally determined by consulting schedules published by the various tax agencies. In this project, however, only the federal and state income tax withholdings are considered. Also, because the calculation of withholding amounts is moderately complicated (married/single, # of exemption allowances, etc.), you are provided precalculated withholding amounts. These withholding amounts are only for the last semimonthly pay period and are provided in the *transactions list* (Doc. No. 1).

The only other employee withholding is for combined social security and medicare insurance (FICA). The federal tax rate and the wage base amount to which these taxes are limited are determined by Congress and are increased from time to time as the financial needs of these important social programs change. For the calendar year 2022, a combined rate of 7.65% is used. Employers must also match this 7.65% as part of their payroll taxes. The social security portion of the rate is 6.2% and is withheld on wages through \$137,700 (the most recent wage base in effect as of this book's publication date). The medicare portion of the rate is 1.45% and is withheld on all wages. None of Waren's employees will reach the \$137,700 wage limit for social security in 2022, so both social security and medicare rates apply to all employees.

State (SUTA) and federal (FUTA) unemployment taxes must also be paid by employers on behalf of their employees. These payroll taxes are handled monthly. Relevant information is included in Waren's month-end procedure 4 on page 13.

JOURNALS, GENERAL LEDGER, AND SUBSIDIARY LEDGERS

Journals. There are six journals included in a separate booklet entitled "Journals." All transactions through December 15 have been recorded in the journals. No general journal transactions have occurred in December as of December 15.

General ledger. The complete general ledger is included on pages 3 through 15 of the Ledgers book. The general ledger accounts are posted through November 30.

Subsidiary ledgers. Subsidiary ledgers for accounts receivable, accounts payable, employee earnings, and fixed assets are included on pages 16 through 23 of the Ledgers book. These subsidiary ledgers include detail information supporting the general ledger control accounts (summary record). For each of these general ledger control accounts, the subsidiary ledger detail accounts will total to the balance in the general ledger. For example, the total of all customer balances in the accounts receivable subsidiary ledger should total to the general ledger balance for accounts receivable. All subsidiary ledgers have been posted through December 15.

SUGGESTIONS FOR EFFICIENCY

1. Be sure to read the appropriate flowchart before performing any procedures. The flowchart specifies what you are to do for each transaction.
2. Keep all unused documents neatly in the documents folder, in document number order. Maintain order in the document system by filing each document in the appropriate file tab in the envelope when you have finished with it.
3. When preparing documents and recording transactions for each requirement, keep the following items handy and available for easy use:
 - Transactions list (Document No. 1)
 - Flowcharts (in this book)
 - Journals (Journals book)
 - Subsidiary ledgers (Ledgers book)
 - Only the specific documents needed to execute and document the current transaction
4. For each transaction, finalize each document, determine which of the special journals is appropriate for the transaction, record it correctly in the journal, and post it to the appropriate subsidiary ledger (if applicable) before proceeding to the next transaction. Do not leave loose ends for later completion.

CALENDAR – 2022 and 2023

November 2022							December 2022							January 2023							
<u>S</u>	<u>M</u>	<u>T</u>	<u>W</u>	<u>T</u>	<u>F</u>	<u>S</u>	<u>S</u>	<u>M</u>	<u>T</u>	<u>W</u>	<u>T</u>	<u>F</u>	<u>S</u>	<u>S</u>	<u>M</u>	<u>T</u>	<u>W</u>	<u>T</u>	<u>F</u>	<u>S</u>	
		1	2	3	4	5					1	2	3	1	2	3	4	5	6	7	
6	7	8	9	10	11	12	4	5	6	7	8	9	10	8	9	10	11	12	13	14	
13	14	15	16	17	18	19	11	12	13	14	15	16	17	15	16	17	18	19	20	21	
20	21	22	23	24	25	26	18	19	20	21	22	23	24	22	23	24	25	26	27	28	
27	28	29	30				25	26	27	28	29	30	31	29	30	31					

REQUIREMENTS

III. REQUIREMENTS

RECORDING MONTHLY TRANSACTIONS

This section includes five parts that you must understand before recording the first transaction.

1. **Locate the transactions list (Document No. 1) and keep it in front of you.** This list includes all the accounting activity of Waren Sports Supply for the last semimonthly period of 2022. Be sure to select the appropriate Document No. 1. There are two documents with the number 1 included with your project, each with different types of transactions. One of these two documents is printed on blue paper and has an (A) in the bottom left corner. The other is printed on green paper and has a (B) in the bottom left corner. You will use one, but not both, of these documents depending upon your instructor's preferences.

If your instructor does not specify which one to use, select the Document No. 1 with an (A) in the bottom left corner and destroy the other one. If your instructor specifies the one with a (B) in the bottom left corner, use that one and destroy the other one.

2. **Select recording option 1 or 2.** There are two recording options for you in working through the *transactions list*. Consult your instructor's assignment schedule to determine which option you are to follow. The two options are:

Option 1 - Cycle-Based Approach

Associate each transaction with a cycle of related transactions and record by cycle. This method of recording transactions is consistent with larger businesses that separate duties within the accounting department. For this option, go through the *transactions list* and classify each transaction according to the following three-cycle framework.

- **Sales and cash receipts.** Sales give rise to accounts receivable, which are later collected. Sales returns, bank deposits, and bad debts are other activities related to this transactions cycle. (Sales and sales returns → accounts receivable and bad debts → cash receipts and bank deposits).
- **Purchases and cash disbursements.** Purchases and purchases returns activity give rise to accounts payable, which later must be paid. (Purchases and purchases returns → accounts payable → cash disbursements).
- **Payroll.** Payroll transactions are usually considered a separate transactions cycle. The payroll check disbursements in this cycle are a separate type from those in the purchases and cash disbursements cycle.

If your instructor assigns this option, you will record each transaction in a cycle following the seven-step process described on pages 11 and 12. Do this for each transaction cycle, in turn. You may be asked to complete the month-end and year-end procedures related to each transaction cycle immediately after recording and posting all the transactions of that cycle. You will then go on to the transactions in the next cycle assigned and repeat this process until the project is completed.

Option 2 – Chronological Approach

Record each transaction in chronological date sequence. This method of recording transactions is common in smaller businesses with fewer transactions where separated accounting duties are not as feasible as in option 1. Following option 2, complete all transactions in the *transactions list* following the seven-step process described below and on page 12 before beginning any month-end procedures.

- 3. Understand the three symbols on Document No. 1.** Each event on the *transactions list* includes one of three symbols, which determine whether documents from the loose document set in the project must be prepared or used:

Yes

You are **required** to prepare or modify documents from the loose document set for this event. An accounting entry *may* or *may not* be required.

No

You are **not required** to prepare or modify documents from the loose document set for the event. An accounting entry *is* required, with one exception; the December 16 change in wage rates.

No*

You are **not required** to prepare or modify documents from the loose document set, although this type of event would normally require you to do so. These events are included to provide additional practice in recording transactions. An accounting entry is required.

* *Transaction List* (B) only

- 4. Identify which transactions require an accounting entry.** Some transactions require only the preparation or modification of documents, others require only an accounting entry in one of the six journals, and still others require both. You should carefully read each transaction on the *transactions list* (Document No. 1) and clearly indicate which ones require an accounting entry.
- 5. Follow the seven-step process for recording a transaction.** You should now begin processing the first transaction. Carefully apply the following instructions to each transaction, in sequence [using recording option 1 (cycle-based approach) *or* 2 (chronological approach) as specified by your instructor].
- i. Read and analyze the transaction on the *transactions list* (Document No. 1).
 - ii. Find the appropriate flowchart or flowcharts on pages 18 through 24 of this book and study Waren's system to learn the procedures to follow. The flowchart specifies the details as to documents to prepare, approvals and other internal control procedures, accounting entries, and filing.
 - iii. Locate and prepare appropriate documents if any are necessary for this transaction. Be sure that each document is filled out completely and that all procedures indicated in the flowcharts are performed (such as initialing for approval, canceling after payment, etc.). You are to perform the roles of Ray Kramer, Nancy Ford, and Jim Adams. Parts of their roles as described in the flowcharts may have already been done.

REQUIREMENTS

- iv. Record the transaction in the appropriate journal if an entry is necessary for this transaction. Use the general journal only when no other journal is appropriate.
- v. Post individual items to *subsidiary ledgers* if necessary for this transaction. Then, place a check mark [✓] in the post reference columns to indicate that *journal* items have been posted.
- vi. File documents in the appropriate file tab in the envelope in accordance with the flowchart description. See pages 5 and 6 of this book for additional filing guidance.
- vii. Proceed to the next transaction. Repeat this process until you have completed all transactions on the *transactions list* (Document No. 1), except month-end and year-end procedures.