Chapter 3

The Accounting System

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Learning Objectives

- Understand the need for and general characteristics of a proper accounting system.
- Understand accounts and how they are impacted by the debit/credit rules.
- Know how to prepare journal entries to describe the effects of transactions and events.
- Post accounts to the general ledger and prepare a trial balance.
- Apply features and tools that are used to enhance and improve accounting systems and processes.

Chapter Outline

Introduction

Exhibit 2.5 shows how transactions systematically impact the accounting equation and resulting financial statements. Although this system works fine as an introduction to the accounting equation, it is not adequate for managing an actual business. Too many transactions originate in too many places for a single tabulation to capture all business activity reliably. Many small businesses have tried to use a simple schedule or spreadsheet to record and process all their activities; however, chaos quickly rules. A more complete and controlled accounting system is needed to manage today's complex businesses. In this chapter, we will explore the design and use of modern accounting practices.

3.1 Exploring Accounting Systems

Large and successful healthcare businesses have invariably developed robust accounting information systems. This suggests that the pathway to business success entails more than just providing excellent medical services. It also entails thoughtful development of well-designed accounting information systems. It is far better to establish a proper system at the outset of launching a healthcare business than to come back later and try to repair an inadequate system. By the time a business discovers that its system is deficient, it is often too late. The business may well have lost control of necessary information for proper business management. The results are often disastrous.

This naturally leads you to wonder about the core elements of a proper system. Clearly, the accounting system must provide a basis for preparing financial statements. This is the end objective and reflects the aggregation of all activity. Thus, the goal of an accounting system is to process transactions and events reliably into useful financial statements and reports. However, the system must also maintain retrievable documentation for every transaction. An important feature is to allow a user to query the system for the purpose of retrieving, verifying, or examining individual details of any specific business transaction.

Computerized accounting systems summarize and interpret all business transactions. The result is useful financial data for purposes of investment and business management. Much of the data input can actually originate with the transaction's execution. For instance, while recording a patient's payment, accounting records can be updated to reflect the transaction. This can additionally trigger adjustments of the company's inventory records (for example, if medical samples or inoculations were given) and even generate an order to replace depleted stock on hand. In addition, bills for insurance companies can also be generated from the information gathered at the time the patient pays their deductibles and co-payments. While this level of sophistication can simplify the data entry process and increase accuracy of subsequent processing, it also entails considerable risk of "invisible" manipulation of data and file destruction.

Thus, a good accounting system must take into consideration the need to control access, verify input, and back up essential records. Even with these important controls, a well-trained accountant must be knowledgeable and vigilant. A basic understanding of debits/credits, journals, and other basic topics is essential to interpret computerized reports and spot errors that may have been inadvertently (or worse, deliberately) introduced into the system.

Computerized accounting information systems are typically built around a database structure. This means that data are stored in an electronic array, including a variety of descriptive codes and indices. This coding process allows you to query the database to extract desired information instantaneously, based on parameters established by the person initiating the request of the accounting system. The long-standing structure of the core financial statements and the basic tools used in their construction are generally preserved in even the most sophisticated electronic environments. Indeed, it is difficult to understand or work within an automated accounting environment without first being moderately familiar and comfortable with the basic accounting tools. This chapter introduces these important tools and helps you understand how they can be effectively used to capture and process information.

3.2 Chart of Accounts

You may be wondering if there is a fixed set of accounts used to develop these accounting systems. The answer is clearly no. Each company's unique business circumstances will dictate the particular accounts that are logical and useful to support its accounting system. Should the need for a new account arise, it is a simple matter to add an additional account. Furthermore, it is common to assign a unique number to each account. The numbering system is usually called a **chart of accounts**. It is common for the numbering scheme to communicate information about the nature of accounts. For example, all assets may be numbered in the 1,000s, liabilities in the 2,000s, and so on. This allows logical

sorting of data. Every company's number system is likely to be unique. The assigned numbers are arbitrary, like zip codes, and are merely a tool of convenience for classifying data. For example, when you code bills to be paid for your department, you are likely using a code related to the Chart of Accounts so the accounting department knows which account to charge. Assume that Kaplan's chart of accounts appears as Table 3.1 shows.

Table 3.1: Kaplan's chart of accounts

Account	Code
Cash	1,000
Accounts receivable	1,010
Supplies	1,020
Land	1,030
Accounts payable	2,010
Loan payable	2,020
Capital stock	3,000
Retained earnings	3,100
Dividends	6,000
Revenue	4,010
Supplies expense	5,010
Wage expense	5,020

3.3 Accounts and Debits/Credits

An **account** is the master record that is maintained for each individual financial statement asset, liability, equity, revenue, expense, or dividend component. Every financial statement element (cash, accounts receivable, inventory, land, accounts payable, etc.) would have its own account and show the impact of all transactions causing a change to that account. The collection of all accounts is known as the **general ledger**.

Importantly, the collective balance of all accounts should conform to the accounting equation, meaning that the sum of all asset accounts will equal the sum of all liability and equity components. Of course, in considering this equation, you need to be mindful that the revenue account increases equity, and expenses and dividends decrease equity.

Beginning students are typically mystified about how this equality is consistently preserved. There is an answer to this, and the answer's brilliance helps explain how the fundamental accounting model has persevered for more than 500 years. Indeed, that the model continues to be programmed into today's highly sophisticated computerized systems speaks volumes about the integrity of the model. The key ingredient is the concept of debits and credits.

Debits and credits are often misunderstood. You may have had your account credited at the bank, you might use a debit card to make a purchase, and you might prepare a credit application! The terms debit and credit are tossed around rather casually in day-to-day activities. At this point, the best thing to do is clear your mind of any meanings that you might already associate with the terms and start anew. Debits and credits are accounting tools, and you should focus on this important point: Every business transaction can be described in terms of debit/credit impacts on specific accounts so that debits will always equal credits.

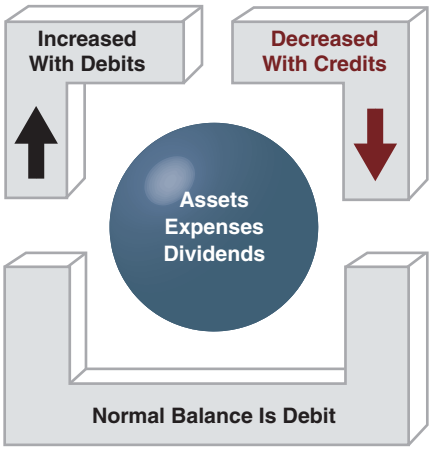
That is an amazing concept! By preserving this equality at the transaction level, the overall equality of the fundamental accounting equation is also preserved. Are you perhaps skeptical? Let's look closer at this model.

Debit and Credit Rules

It is best to begin by memorizing certain "rules" about debits and credits. These rules are not necessarily intuitive, but at least they are not hard to learn. Think of learning them in the same way that you might memorize a few key words in a unfamiliar language, prior to taking a trip to a place where that is the only language spoken. Accountants and businesspeople routinely speak about transactional effects in the context of debits and credits.

Debit (often abbreviated "dr" and sometimes taken to mean "to record on the left-hand side of an account," as will become apparent shortly) is simply the action of recording an increase to an asset, expense, or dividend account. Conversely, **credit** (abbreviated "cr" and sometimes taken to mean "to record on the right-hand side of an account") is the action of recording a decrease to those same accounts. For example, if Cash (an asset) is increased, we say that we are debiting Cash. If Accounts Receivable (another asset) is decreased, we say that we are crediting Accounts Receivable. Therefore, if a transaction involves collecting $1,000 cash from a customer who owes us the money (i.e., we have a previously established account receivable on our balance sheet), then we simply say that we are debiting Cash and crediting Accounts Receivable for $1,000. By their nature, asset, expense, and dividend accounts usually have more debits than credits and are said to have a normal debit balance (see Figure 3.1).

Figure 3.1: Assets, expenses, and dividend accounts



Liability, revenue, and equity accounts behave in an opposite fashion. They are increased with credits and decreased with debits. By their nature, these accounts usually have more credits than debits and are said to have a normal credit balance (see Figure 3.2). Table 3.2 lists many typical accounts, showing the application of the debit and credit rules.

Figure 3.2: Liability, revenue, and equity accounts

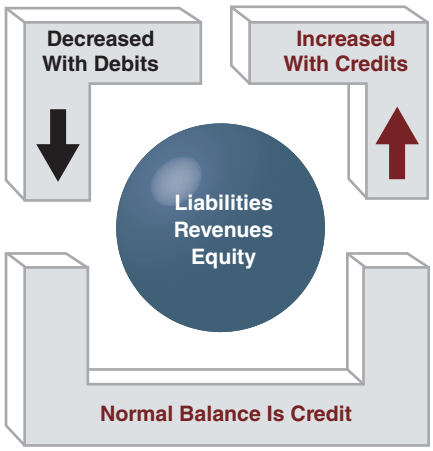


Table 3.2: Schedule of debit and credit rules for typical accounts

	Normal Balance	Increased With	Decreased With
Typical Assets			
Cash	Debit	Debit	Credit
Accounts receivable	Debit	Debit	Credit
Inventory	Debit	Debit	Credit
Land	Debit	Debit	Credit
Buildings	Debit	Debit	Credit
Equipment	Debit	Debit	Credit
Typical Liabilities			
Accounts payable	Credit	Credit	Debit
Salaries payable	Credit	Credit	Debit
Notes and loans payable	Credit	Credit	Debit
Typical Equities			
Capital stock	Credit	Credit	Debit
Retained earnings	Credit	Credit	Debit

(continued)

Table 3.2: Schedule of debit and credit rules for typical accounts *(continued)*

	Normal Balance	Increased With	Decreased With
Typical Revenues			
Service revenue	Credit	Credit	Debit
Sales	Credit	Credit	Debit
Typical Expenses			
Salaries and wages	Debit	Debit	Credit
Utilities	Debit	Debit	Credit
Interest	Debit	Debit	Credit
Rent	Debit	Debit	Credit
Supplies	Debit	Debit	Credit
Taxes	Debit	Debit	Credit
Dividends			
Dividends	Debit	Debit	Credit

In addition to the preceding rules, a few select accounts are known as contra accounts. You will be exposed to these accounts in future chapters related to accounts receivable, plant assets, and certain long-term indebtedness. A contra account is an offset to another account and has opposite debit and credit rules. For example, matching the expenses of a building asset with an organization's revenue over the passage of time can result in a reduction in the asset's reported cost. This impact is reflected as accumulated depreciation, which is netted against (i.e., reported as contra to) the building asset. Thus, the accumulated depreciation is reported within the asset section but has opposite debit and credit rules (e.g., increased with a credit and vice versa). This concept will be covered in more sufficient depth later.

T-Accounts

No introduction to accounting would be complete without mentioning **T-accounts**. A T-account is not part of an accounting system; it is only a device that is used to demonstrate the impact of certain transactions and events. T-accounts are useful teaching tools. Accountants also use them when chatting about accounting effects. You can think of T-accounts as accounting on a napkin—a quick and informal way to look at an account. A T-account is shaped like a "T," with debits on the left and credits on the right. Exhibit 3.1 illustrates T-accounts showing the effects of purchasing $50,000 of equipment for $10,000 cash and a $40,000 note payable. In this case, Equipment (an asset) is increased via the debit; Cash (an asset) is decreased via the credit; and Note Payable (a liability) is increased with the credit. When you meet with the accounting department liaison about your reports, your liaison may use T-accounts to review transactions you may be questioning.

Exhibit 3.1: Example T-accounts

Equipment		Cash		Note Payable	
Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
50,000			10,000		40,000

The only limit to what can be illustrated within T-accounts is the size of the paper on which they are drawn. Exhibit 3.2 shows a T-account for Cash corresponding to all activity that impacted this particular account. Notice that the excess of debits over credits equals the ending cash balance. Later in this chapter, you will see a comprehensive example for Kaplan's Medical Clinic, and this particular T-account will correspond to the cash transactions described therein.

Exhibit 3.2: Sample T-account for Cash

Cash			
	Dr.	Cr.	
Beginning balance	$ 50,000	$ 6,000	Payable
Services for cash	10,000	20,000	Land
Collection	20,000	7,000	Wages
Stock issue	12,000	5,000	Dividends
Total debits	92,000	38,000	Total credits
Resulting balance	$ 54,500		

Note that on a T-account there will only be a balance shown on one side of the "T." In this sample of a Cash account, which is usually an account that has a debit balance, the balance is only shown in the debit column.

3.4 Transaction Analysis

The process of maintaining accountability over a business's affairs begins with an analysis of each transaction. You must determine what accounts are impacted and how they are impacted (increased or decreased). These increase/decrease impacts are then translated into the accounting language of debits and credits. You may be wondering why it is not possible to just use increase and decrease to describe effects on accounts. Simply put, increases will not always equal decreases.

For example, if one purchased inventory (an asset) with an account payable (a liability), both sides of the balance sheet increase. In other words, Inventory increases on the asset side, and Accounts Payable increases on the liability side. When converted to debit/credit consequence, the same transaction is described as a debit to Inventory (assets are increased with debits) and a credit to Accounts Payable (liabilities are increased with credits). Identifying a transaction where debits do not appropriately equal credits is impossible. Conversely, it is possible to identify a mishmash of transactions that display every conceivable combination of increases and decreases, some of which are offsetting and some of which are not. Is it starting to make sense why accountants stick with debit and credit nomenclature?

Critical Thinking About Transaction Analysis

Perhaps one of the more frustrating parts of learning accounting is developing the skills necessary to evaluate transactions and describe the debit/credit impacts on all affected accounts. This is akin to learning a new language. For most people, practice and repetition is required. If you try to skip over this part of the learning process, you will find yourself increasingly frustrated with future chapters. If you don't take the time to learn these basics, you will have great difficulty working with your organization's accountants when developing budgets and analyzing transactions for your department or division. Table 3.3 is not exhaustive but is intended to provide you with some added guidance and practice in transaction analysis.

Table 3.3: Transaction analysis

Example Transactions	Critical Thinking	Conclusion
Provide services for cash.	Cash, an asset, and Revenues are both increased.	Debit Cash. Credit Revenues.
Provide services on account.	Accounts Receivable, an asset, and Revenues are both increased.	Debit Accounts Receivable. Credit Revenues.
Pay an expense with cash.	Expenses are increased and Cash, an asset, is decreased.	Debit Expense. Credit Cash.
Incur an expense on account.	Expenses and Accounts Payable, a liability, are both increased.	Debit Expense. Credit Accounts Payable.
Buy an asset for cash.	The specific purchased is increased, and Cash, an asset, is decreased.	Debit Asset. Credit Cash.
Buy an asset with debt.	The specific asset purchased and Loan Payable, a liability, are both increased.	Debit Asset. Credit Loan Payable.
Collect an account.	Cash, an asset, and Accounts Receivable, an asset, are both decreased.	Debit Cash. Credit Accounts Receivable.

(continued)

Table 3.3: Transaction analysis *(continued)*

Example Transactions	Critical Thinking	Conclusion
Pay an account.	Cash, an asset, and Accounts Payable, a liability, are both decreased.	Debit Accounts Payable. Credit Cash.
Borrow cash.	Cash, an asset, and Loan Payable, a liability, are both increased.	Debit Cash. Credit Loan Payable.
Issue stock for cash.	Cash, an asset, and Capital Stock, an equity account, are both increased.	Debit Cash. Credit Capital Stock.
Pay a dividend.	Dividends are increased and Cash, an asset, is decreased.	Debit Dividends. Credit Cash.

An Applied Example of Transaction Analysis

To reiterate these important concepts, let's revisit the example from Chapter 2 (see Table 2.2). This time, however, the table is expanded to include an extra column showing the debit and credit impacts (Table 3.4). Spend some quality time thinking about each transaction and how the proposed debit and credit impacts tie in to the debit and credit rules.

Table 3.4: Debit and credit impacts

Description	Amount	Discussion of How Balance Is Maintained	Debit = Credit Translation
Provided medical services for cash	$10,000	Cash (an asset) and Revenues both increase; revenues increase income, which increases equity.	Cash, an asset, is increased with a debit = Revenue is increased with a credit.
Provided medical services to be billed to insurance companies	$30,000	The asset, Accounts Receivable (representing amounts due from customers for work already rendered), is increased, which is matched with an increase in Revenues, Income, and Equity.	Accounts Receivable, an asset, is increased with a debit = Revenue is increased with a credit.
Collected amounts due from insurance companies	$20,000	Cash is increased and Accounts Receivable is decreased, resulting in no change in total assets.	Cash, an asset, is increased with a debit = Accounts Receivable, an asset, is decreased with a credit.

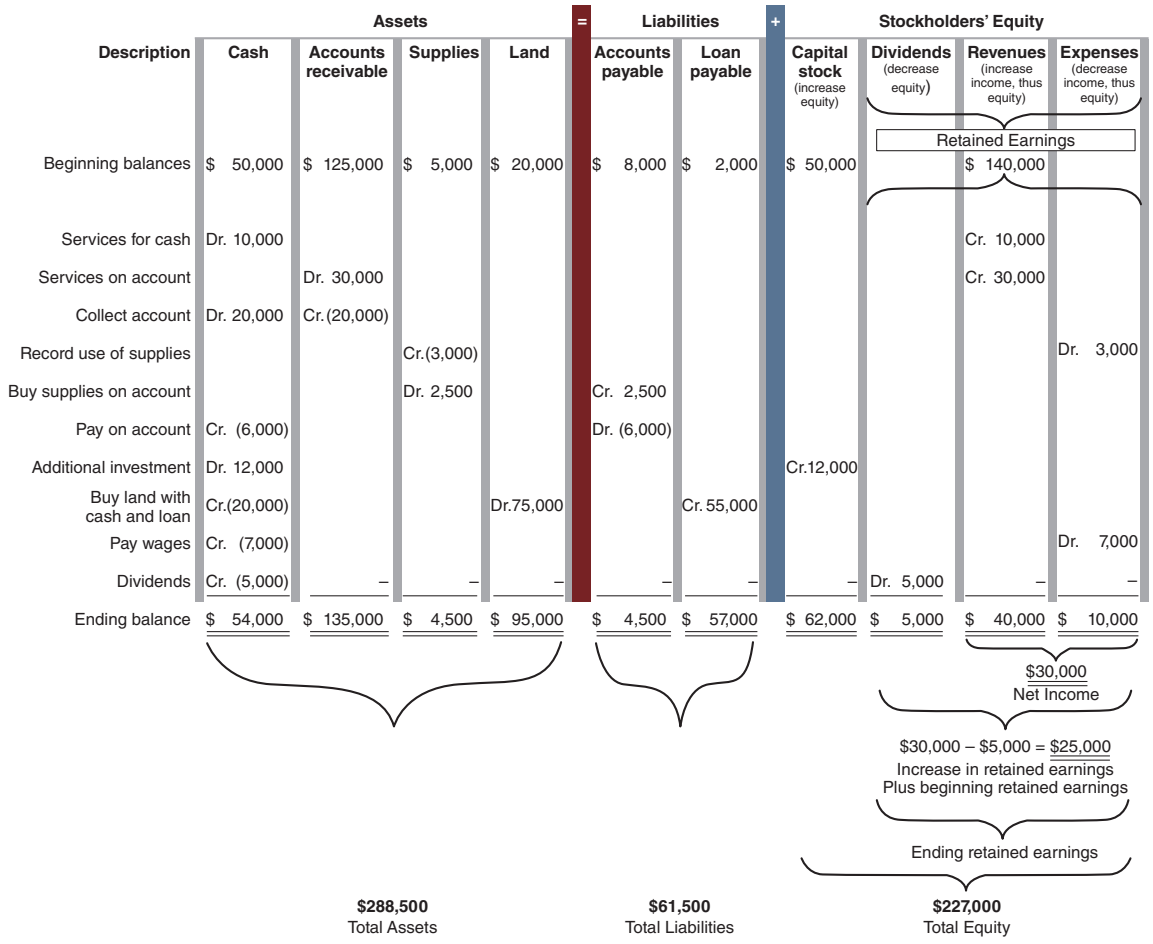
(continued)

Table 3.4: Debit and credit impacts *(continued)*

Description	Amount	Discussion of How Balance Is Maintained	Debit = Credit Translation
Used up supplies in the process of providing services to customers	$ 3,000	An existing asset, Supplies, is used up and must be removed from the Asset account. This represents an Expense (expenses decrease income and therefore equity).	Supplies Expense, an expense, is increased with a debit = Supplies, an asset, is decreased with a credit.
Bought additional supplies on account	$ 2,500	Supplies increase, as does the Accounts Payable liability account.	Supplies, an asset, is increased with a debit = Accounts Payable, a liability, is increased with a Credit.
Paid amounts due on outstanding Accounts Payable	$ 6,000	Cash and Accounts Payable are both decreased.	Accounts Payable, a liability, is decreased with a debit = Cash, an asset, is decreased with a credit.
Issued additional shares of stock	$12,000	Cash and the Capital Stock account are both increased by the same amount.	Cash, an asset, is increased with a debit = Capital Stock, an equity account, is increased with a credit.
Purchased land for cash ($20,000) and incurred a $55,000 loan	$75,000	Land (an asset) goes up by $75,000. This is offset by a $20,000 reduction in Cash. The balancing amount of $55,000 is reflected as increase in the liability account Loan Payable.	Land, an asset, is increased with a debit for $75,000 = Cash, an asset, is decreased with a credit for $20,000, and Loan Payable, a liability, is increased with a Credit for $55,000.
Paid wages to employees	$ 7,000	Cash is decreased, as is Income/Equity via the recording of Wages Expense.	Wage Expense, an expense, is increased with a debit = Cash, an asset, is decreased with a credit.
Paid dividends to shareholders	$ 5,000	Cash is decreased and the Dividends account is increased by the same amount (which causes a decrease in Retained Earnings and Equity).	Dividends are increased with a debit = Cash, an asset, is decreased with a credit.

You might have noticed that some transactions can impact more than just two accounts. This example included the purchase of land for cash and a loan payable. Nevertheless, these compound entries are still expected to balance. Exhibit 3.3 is a repeat of Exhibit 2.5 but revised to reflect debits and credits in lieu of pluses and minuses. Carefully note that debits equal credits within each row.

Exhibit 3.3: Spreadsheet for Kaplan's Medical Center for December



Pressing forward, you now have a basis to understand the fundamental way in which businesses process transactions into useful financial reports. It all begins with an analysis of transactions and their conversion into a debit and credit characterization. Obviously, this information must be systematically logged into the accounting records. Sometimes this occurs automatically, such as with a patient transaction when the patient arrives or when the patient signs out with codes indicated at time of checkout. More extensive coding may be done manually with human interaction for more complex procedures. Other times, a specific human action initiates the recording activity.

3.5 General Journal

You are familiar with the concept of a journal. Perhaps you or someone you know keeps a daily journal of life's events. Borrowing this concept and applying it to a business, the **general journal** is a log of the transactions engaged in by the business. However,

rather than just describing transactions in narrative form (such as "collected Cash on an outstanding Account Receivable"), the journal includes this information in debit and credit form. This information is usually logged, or journalized, in chronological order. It is the starting point for collecting information about business activity and has been called the book of original entry.

Exhibit 3.4 is an example journal page for Kaplan's Medical Clinic. The entries correspond to the activity described in Table 3.3. Also note that debits are customarily listed first within each journal entry. Debits are naturally followed by credits and are indented. These data and entries reflect a summary of all activity for December. More likely, a business's journal will have an entry for each transaction.

Exhibit 3.4: Example journal entries for Kaplan's Medical Clinic

General Journal			
Date	**Accounts**	**Debit**	**Credit**
Dec. 20X5	Cash	$ 10,000	
	Revenues		$ 10,000
	Provided services for cash		
Dec. 20X5	Accounts Receivable	30,000	
	Revenues		30,000
	Provided services to be paid by insurers		
Dec. 20X5	Cash	20,000	
	Accounts Receivable		20,000
	Collected outstanding receivable		
Dec. 20X5	Supplies Expense	3,000	
	Supplies		3,000
	Used supplies from existing inventory		
Dec. 20X5	Supplies	2,500	
	Accounts Payable		2,500
	Purchased supplies to account		
Dec. 20X5	Accounts Payable	6,000	
	Cash		6,000
	Paid outstanding account payable		
Dec. 20X5	Cash	12,000	
	Capital Stock		12,000
	Issued capital stock for cash		
Dec. 20X5	Land	75,000	
	Cash		20,000
	Loan Payable		55,000
	Purchased land for cash and loan		
Dec. 20X5	Wages Expense	7,000	
	Cash		7,000
	Issued capital stock for cash		
Dec. 20X5	Dividends	5,000	
	Cash		5,000
	Paid dividends to shareholders		

Posting the General Ledger

At this point, you may be wondering how to prepare financial statements from the journal's information. The short answer is that you would not! You cannot simply look at the journal, for example, and know how much cash Kaplan's Medical Clinic has on hand. The data from the journal must be compiled (or sorted) into relevant accounts. This process is usually called **posting**, the process of transferring data from the journal into the general ledger. Think of the ledger as a notebook containing a separate page for each account. The Cash account in the general ledger might look like that shown in Exhibit 3.5.

Exhibit 3.5: Sample page from the general ledger for the Cash account

Account: Cash				
Date	**Description**	**Debit**	**Credit**	**Balance**
Dec. 20X5	Balance forward			$ 50,000
Dec. 20X5	Provided services for cash	$ 10,000		60,000
Dec. 20X5	Collected receivable	20,000		80,000
Dec. 20X5	Paid outstanding accounts payable		$ 6,000	74,000
Dec. 20X5	Issued capital stock	12,000		86,000
Dec. 20X5	Purchased land		20,000	66,000
Dec. 20X5	Paid wages		7,000	59,000
Dec. 20X5	Paid dividends		5,000	54,000

Notice that beginning balance of Cash is updated for each transaction. A similar process would apply to each account. In other words, every entry in the journal is posted in the appropriate cell in the ledger. This process enables you to review the ledger and determine the balance for each account. Exhibit 3.6 shows a comprehensive illustration for Kaplan's general journal and ledger for December.

Exhibit 3.6: Kaplan's general journal and ledger

General Journal — Page 1

Date	Accounts	Debit	Credit
Dec. 20X5	Cash	$10,000	
	Revenues		$10,000
	Provided services for cash		
Dec. 20X5	Accounts receivable	30,000	
	Revenues		30,000
	Provided services on account		
Dec. 20X5	Cash	20,000	
	Accounts receivable		20,000
	Collected outstanding receivable		
Dec. 20X5	Supplies expense	3,000	
	Supplies		3,000
	Used supplies from existing inventory		
Dec. 20X5	Supplies	2,500	
	Accounts payable		2,500
	Purchased supplies on account		
Dec. 20X5	Accounts payable	6,000	
	Cash		6,000
	Paid outstanding account payable		
Dec. 20X5	Cash	12,000	
	Capital stock		12,000
	Issued capital stock for cash		
Dec. 20X5	Land	75,000	
	Cash		20,000
	Loan payable		55,000
	Purchased land for cash and loan		
Dec. 20X5	Wages expense	7,000	
	Cash		7,000
	Issued capital stock for cash		
Dec. 20X5	Dividends	5,000	
	Cash		5,000
	Paid dividends to shareholders		

Account: Cash

Date	Description	Debit	Credit	Balance
Dec. 20X5	Balance forward			$ 50,000
Dec. 20X5	Provided services for cash	$ 10,000		60,000
Dec. 20X5	Collected receivable	20,000		80,000
Dec. 20X5	Paid outstanding accounts payable		$ 6,000	74,000
Dec. 20X5	Issued capital stock	12,000		86,000
Dec. 20X5	Purchased land		20,000	66,000
Dec. 20X5	Paid wages		7,000	59,000
Dec. 20X5	Paid dividends		5,000	54,000

Account: Accounts Receivable

Date	Description	Debit	Credit	Balance
Dec. 20X5	Balance forward			$ 125,000
Dec. 20X5	Provided services on account	$ 30,000		155,000
Dec. 20X5	Collected receivable		$ 20,000	135,000

Account: Supplies

Date	Description	Debit	Credit	Balance
Dec. 20X5	Balance forward			$ 5,000
Dec. 20X5	Used supplies		$ 3,000	2,000
Dec. 20X5	Purchased supplies	$ 2,500		4,500

A properly designed system of journals and ledgers will usually include a numeric cross-referencing system that allows you to trace journal entries to the ledger and vice versa. In a manual system, check marks may also indicate that a particular transaction has been posted to the ledger. Without these marks, it would be very easy to fail to post a transaction or even to post the same transaction twice. Computerized posting somewhat eliminates this particular risk. Sometimes a unique number is assigned to each transaction, further improving the ability to trace transactions through the entire accounting system. However accomplished, a company should maintain an indexing system to allow a user to trace amounts back to the original transaction in the journal and to be certain that each transaction was appropriately processed into the ledger.

Review of the Sequence of Transaction Recording

To review, notice that the accounting sequence has entailed (1) analyzing each transaction to determine the accounts involved and whether those accounts need to be debited or credited, (2) preparing a journal entry for the transaction, and (3) occasional posting of journal entries to the ledger. This process sounds pretty mundane, and you may be wondering how anyone can think of accounting work as exciting, analytical, or dynamic.

Dismiss the thought. What has been described is really just the beginning of the accounting process. It has been pointed out that much of this work lends itself to automation. The process just described is bookkeeping, not accounting. **Bookkeeping** is the skill or process of recording transactions; accounting goes much further.

To extend this thought, you should now begin to appreciate that much of what has been shown thus far is based only on the recording of observed transactions. Other transactions or events may have occurred but not yet triggered into the accounting system. For instance, the business may have done some work that has not yet been billed. Utilities might have been consumed, but no bill has been received. Further, some accounts may need to be updated. Recall the earlier reference to accumulated depreciation. As time passes, additional depreciation occurs and should be recorded. There is no automatic triggering or observable transaction for this process.

To prepare truly correct financial statements, additional accounting steps are needed to adjust the various accounts within the financial statements. This adjustment process will be demonstrated in Chapter 4. There, you will be introduced to accrual accounting concepts and income measurement processes. That is the point where you will begin to understand where true accounting thought begins and bookkeeping ends. First, however, there are a few important loose ends to consider. There is no particular order to the following discussion. It simply provides additional important points that you need to know about.

A Balanced Trial Balance: No Guarantee of Correctness

Once all the transactions have been posted, the balances in all the accounts will be listed in a **trial balance**. The trial balance proves that debits equal credits. This suggests that all journal entries were in balance and fully posted to the ledger. However, the equality is no guarantee that there are no errors. If the same transaction was recorded twice, or part or all of an entry was posted to the wrong accounts, the trial balance would still be in balance. If a transaction was not recorded at all or some form of end-of-period adjustment was omitted, a trial balance would also fail to reveal these events. So, the trial balance is a great tool to identify some but not all potential problems within the accounting system. Numerous other processes are used to verify the correctness of accounts. For example, the Cash account should additionally be verified by periodic bank reconciliations. (Later chapters will introduce methods and procedures accountants deploy as part of the financial statement assurance process.)

Special Journals

This text illustrates all journal entries as occurring within the general journal. However, some computerized and manual accounting systems will subdivide some journalizing activity into multiple **special journals**. For example, all cash outflows might be recorded in a cash disbursements journal. Conversely, cash receipts might all be recorded in a cash receipts journal. Other special journals can be designed to capture sales on account, payroll, purchases on account, and other redundant activities.

The benefits of special journals are many. For example, payroll records can be consolidated and housed in a single accounting record. Recording all sales on account within a specially designed journal can be helpful when billing customers. Additionally, special journals can reduce the amount of processing and posting that is necessary within a manual system. Consider that all cash receipts involve a debit to Cash. Thus, it would be possible to post only a single debit to Cash for the aggregate of all transactions listed within the cash receipts journal. Basically, special journals are optional tools that can streamline the components of the accounting system. Strict reliance on only a general journal can result in an excessively voluminous set of accounting records. Nevertheless, any transaction can always be recorded in a general journal, and the general journal is supplemented (but not replaced) by special journals.

3.6 Source Documents

A company must also be careful to maintain **source documents**. Most transactions are represented by a source document, which provides tangible evidence of the existence and nature of a transaction. Cash disbursements typically occur by issuing a check or bank transfer. Sales to customers are usually accompanied by a receipt or invoice. There are numerous types of source documents. They usually trigger the recording of a transaction and are often analyzed to determine how a transaction has impacted specific accounts.

Source documents should be preserved as evidence of transactions. To provide information about a past transaction, looking back at a source document is frequently necessary. Electronic imaging has facilitated the ability to retain such documents going back many years. The real trick is not in retaining the documents themselves but doing so in such a way that they can be found. Thus, dating, numbering, and cataloging source documents are all crucial. Accountants may help design and implement a strong information system, and the journal/ledger system will usually link into the source document archives of modern information systems. The days of storing old documents in numbered boxes stacked deep within an old warehouse are rapidly fading away.

3.7 Thinking About Automation

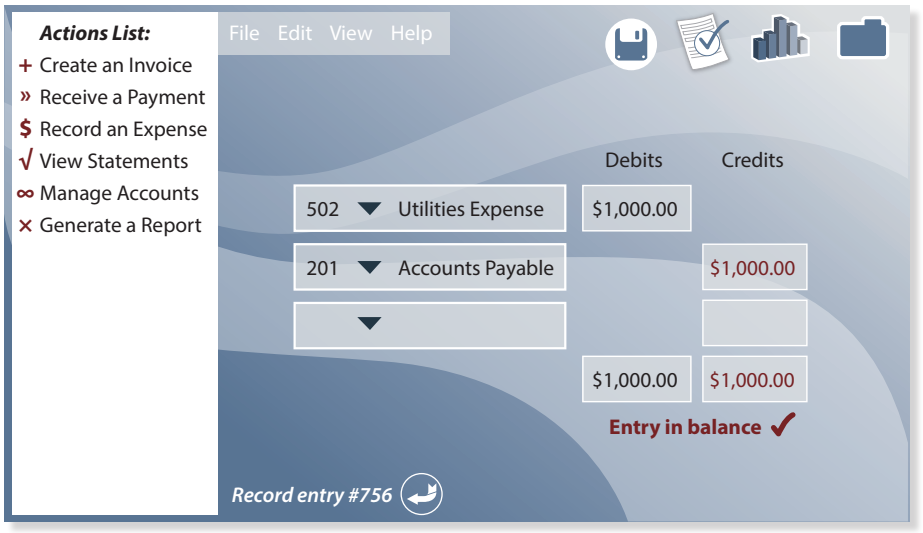
Throughout this chapter, a number of references have been made to computerized accounting. Most types of accounting software have a number of features in common. For starters, programmers know the need to simplify and automate data entry. This invariably includes attempts to integrate the journalizing process with the origin of the transaction itself. Earlier, it was noted that transactions entered in a point-of-sale terminal may also link into the accounting system. Inventory movement may be tracked with radio frequency identification chips, and that tracking process can link into the company accounting system. Time clocks for tracking employee labor hours can become input devices for payroll accounting.

Automated systems are usually subdivided into modules. There may a separate module for the revenue cycle, which serves to track all sales and collections. Another module can

relate only to payroll. Numerous other modules can be deployed. These modules enable subdivision of processing to persons especially familiar with selected portions of a business. Individual modules may be password protected. For instance, a payroll accountant would not need to be privy to sales activity and vice versa. The consolidated view of the entire business and the ability to view aggregated reports and financial statements should be limited to only those with a need or right to know. Software allows this important control feature.

Accounting software is also designed to be user friendly. It usually includes click lists, drag-and-drop tools, and auto-complete functions that allow users to quickly select options and enter data, similar to Figure 3.3.

Figure 3.3: Typical accounting software



3.8 Critical Thinking About Debits and Credits

Earlier you were asked to clear your mind of any preconceived notions about debits and credits. Let's now try to make sense of how the terms are sometimes used in day-to-day commerce. If a bank informs you that it is crediting your account, then it is increasing your account. Bear in mind that your account is reflected as a liability on a bank's balance sheet because it owes you the money that you deposited with it. In other words, when the bank credits your account, it is increasing its liability to you, and you have more funds on deposit. Conversely, if you use a debit card when you spend, your cash in the bank is decreasing (and the bank is debiting your account). When you fill out a credit application, you are asking for authorization to increase your debt. Each use of the terms *debit* and *credit* can logically be traced back to the effect on one party's financial statements, and those effects correspond to the debit and credit rules you learned in this chapter.

Case Study: Miller Health Clinics

Bonnie Jones has just taken over as the accountant for the Miller Health Clinics. The books are not kept with the level of detail that she prefers. She develop the following T-accounts based on the information taken from the books of Miller Health Clinics on December 31 of the current year. Letters in the accounts reference specific transactions of the firm. She wants to sort out these transactions based on this letters and figure out what each transaction entailed.

Cash

(a) 35,000	(d) 3,000
(b) 10,000	(h) 1,500
(f) 8,000	(j) 800
(i) 400	

Accounts Receivable

(c) 14,000	(f) 8,000

Medical Equipment

(b) 26,000	(g) 7,000
(e) 9,000	

Accounts Payable

(g) 7,000	(e) 9,000
(j) 800	

Loan Payable

(h) 1,500	(a) 35,000

Miller, Capital

	(b) 36,000

Fees Earned

	(c) 14,000

Advertising Expense

(d) 2,000	(i) 400

Utilities Expense

(d) 1,000	

Case Study Exercises

1. Write a brief explanation of each of the transactions (a) – (j).
2. Determine the balance in each account.

Key Terms

account The master record that is maintained for each individual financial statement asset, liability, equity, revenue, expense, or dividend component.

bookkeeping The skill or process of recording of transactions.

chart of accounts A numbering system in which a unique number is assigned to each account.

credit The action of recording a decrease to an asset, expense, or divided account.

debit The action of recording an increase to an asset, expense, or divided account.

general journal A log of the transactions engaged in by the business.

general ledger The collection of all accounts.

posting The process of transferring data from the journal into the general ledger.

source document Tangible evidence of the existence and nature of a transaction.

special journal A subdivision of a general journal.

T-account A device that is used to demonstrate the impact of certain transactions and events.

trial balance A listing of accounts and their respective balances.

Review Questions

The following questions relate to several issues raised in the chapter. Test your knowledge of these issues by selecting the best answer. (The odd-numbered answers appear in the answer appendix.)

1. A credit is used in accounting to

   a. increase an asset account.
   b. decrease a liability account.
   c. increase a revenue account.
   d. increase an expense account.

2. Allied Healthcare, Inc. recently purchased some office equipment on account. The proper entry would involve a

   a. debit to Office Expense and credit to Accounts Payable.
   b. debit to Office Equipment and credit to Accounts Payable.
   c. debit to Office Equipment and credit to Accounts Receivable.
   d. debit to Accounts Payable and credit to Office Equipment.

3. Briefly explain how a typical accounting system operates.

4. What is a general ledger?

5. In terms of debits and credits, liabilities are decreased by _____, assets are increased by _____, and revenues are increased by _____.

6. Explain the relationship between the accounting equation and normal account balances.

7. Les Howard accidentally debited an expense account rather than an asset account. As a result of this error, determine whether the following items will be overstated, understated, or unaffected.
   a. Total assets will be _____.
   b. Total expenses will be _____.
   c. Net income will be _____.

Exercises

1. **Recognition of normal balances**. The following items appeared in the accounting records of Eastern Medical Clinic. Classify each item as an asset, liability, revenue, or expense from the company's viewpoint. Also indicate the normal account balance of each item.

   a. medical equipment for use in patient care
   b. a long-term loan owed to Citizens Bank
   c. advertising the clinic
   d. daily receipts for patient care
   e. amounts due from insurers
   f. land held as an investment
   g. a new fax machine purchased for office use
   h. amounts to be paid in 10 days to suppliers
   i. amounts paid to a mall for rent

2. **General journal and general ledger content**. St. James Medical Services uses a general journal and general ledger to process transactions. Assume that the volume of transactions has grown in recent months and that all posting procedures have already been performed. A manager has requested that you provide the following data:

   a. the total amounts that patients owe the firm as of May 31.
   b. the accounts that were increased or decreased by a particular transaction on a specific date.
   c. the total cash received during May.
   d. the reason for a cash disbursement on May 14.
   e. a dated listing of all decreases to the Accounts Payable account during the month.

   Evaluate the data requests of the manager independently and determine whether the requests can be answered most efficiently by a review of the company's general journal or the general ledger.

3. **Basic journal entries**. The following April transactions pertain to the Jennifer Royall Medical Services:

   4/1: Received cash of $15,000 and land valued at $10,000 from Jennifer Royall as an investment in the business.

   4/5: Provided $1,200 of services to Jason Ratchford, a patient.

4/5: Ratchford agreed to pay $800 in 15 days and the remaining amount in May.

4/9: Paid $250 in salaries to an employee.

4/19: Acquired a new computer for $3,200; Royall will pay the dealer in May.

4/20: Collected $800 from Jason Ratchford for services provided on April 5.

4/24: Borrowed $7,500 from Best Bank by securing a 6-month loan.

Prepare journal entries (and explanations) to record the preceding transactions and events.

Problems

1. **Journal entry preparation**. On January 1 of the current year, Houston Medical Services began operations with $100,000 cash. The cash was obtained from an owner (Dr. Peter Houston) investment of $70,000 and a $30,000 bank loan. Shortly thereafter, the company acquired selected assets of a bankrupt competitor. The acquisition included land ($15,000), a building ($40,000), and vehicles ($10,000). Houston Medical Services paid $45,000 at the time of the transaction and agreed to remit the remaining balance due of $20,000 (an account payable) by February 15.

   During January, the company had additional cash outlays for the following items:

Purchases of medical equipment	$4,600
Loan payment, including $100 interest	500
Salaries expense	2,300
Advertising expense	700

   The January utilities bill of $200 was received on January 31 and will be paid on February 10. Houston Medical Services rendered services to patients on account, amounting to $9,400, which was billed to insurance companies. All insurers have been billed; by month-end, $3,700 had been received in settlement of account balances.

Instructions

   a. Present journal entries that reflect Houston Medical Services's January transactions, including the $100,000 raised from the owner investment and loan.
   b. Compute the total debits, total credits, and ending balance that would be found in the company's Cash account.
   c. Determine the ending balance for the Accounts Payable journal. Is the balance a debit or a credit?