ACCOUNTING INFORMATION SYSTEMS

7

SMART TOUCH LEARNING Balance sheet as at 30 June 2021							
	$	$	$				$
Assets				**Liabilities**			
Current assets:				Current liabilities:			
Cash		4 800		Accounts payable			48 700
Accounts receivable		2 600		Salary payable			900
Inventory		30 500		Interest payable			100
Supplies		600		Unearned service revenue			400
Prepaid rent		2 000		Total current liabilities			50 100
Total current assets			40 500	Non-current liabilities:			
Non-current assets:				Loans payable			20 000
Furniture	18 000			Total liabilities			70 100
Less: Accumulated depreciation—furniture	300	17 700					
Building	48 000						
Less: Accumulated depreciation—building	200	47 800		**Owners' equity**			
Total non-current assets			65 500	Sheena Bright, capital			35 900
Total assets			106 000	Total liabilities and owners'			
				equity			106 000

Sample pages

MUCH OF THE INFORMATION PERIODICALLY GIVEN IN THE BALANCE SHEET and other financial statements of Smart Touch Learning will be produced automatically from transaction data stored in computers using software such as MYOB and Xero. Today, so-called 'digitisation' as well as automation is having an impact on the traditional roles of accountants in business, as explained in the *Connect to: Technology* box overleaf.

LEARNING OBJECTIVES

LO 1 Identify the four essential elements of an effective accounting information system

LO 2 Describe the key elements of computerised and manual accounting systems, and explain how they work

LO 3 Describe how general ledger journal entries are entered and processed

LO 4 Describe how accounts receivable transactions are entered and processed

LO 5 Describe how accounts payable transactions are entered and processed

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CONNECT TO: TECHNOLOGY

The disruptive impact of the digital revolution on accounting

The accounting profession needs to prepare for both change and threats to competitive advantage because there is an accelerating and disruptive digital technologies transformation in progress called the 'digital revolution'.

We are witnessing significant changes in the nature of technologies available to today's managers and employee teams with regard to infrastructure, availability and capacity. These elements have accumulated in four key technologies often referred to as SMAC—Social, Mobile, Analytics and Cloud.[1] Venture capital investors have recently shifted towards big data and artificial intelligence that combine these technologies. These investments are accelerating the impact of this revolution.

Five accounting functions that may be affected by digitation are:

1 *Transactional accounting processes*—Clerical accountants are vulnerable to digitisation and automation because their roles involve routine tasks like bookkeeping and data entry.
2 *Fiscal period-end accounting procedures*—Affordable commercial software automates the workflow processes of the monthly, quarterly and fiscal year-end accounting close-off.
3 *Auditing*—Using an AI-expert[2] system capable of scanning through 100% of the data and applying advanced analytics and anomaly detection in the audit can lead to better-informed risk assessments and a reduced need for sampling.
4 *Business process outsourcing (BPO) of accounting tasks*—With centralisation and economies of scale from having multiple customers, a BPO provider can often perform both front- and back-office accounting tasks more efficiently.
5 *XBRL regulatory filings*—XBRL (eXtensible Business Reporting Language) is a global format that can be used to digitally transmit financial statement filings to government regulatory agencies.

Source: Adapted from *icrunchdata*, 14 September 2018, https://icrunchdata.com/blog/594/the-disruptive-impact-of-the-digital-revolution-on-accounting; co-written by Gary Cokins and Solon Angel on icrunchdata.com, accessed 20 August 2019.

Notes
[1] In SMAC, 'Social' refers to social media (websites and applications allowing users to share content and network socially with others); 'Mobile' denotes devices allowing users to run applications from anywhere; 'Analytics' refers to descriptive, predictive and prescriptive applications of data to support management decisions; and 'Cloud' denotes services that allow a business to access data storage and software remotely over the internet.
[2] AI = artificial intelligence.

This chapter provides, first, a brief introduction to some of the fundamental concepts involved in computerised accounting information systems and the use of spreadsheets; second, it shows in more detail how the main basic business transactions, including GST, are processed through the accounting system so that their financial effects can be easily extracted for disclosure in financial statements.

Generally, an **accounting information system** (AIS) is the combination of personnel, records and procedures that a business uses to provide financial information. It has two basic components: a **journal entry** and a **ledger**. Every accounting system has these components, in either 'hard' or 'soft' form. AISs are computerised to do the accounting faster and more reliably, allowing transactions to be captured either manually or electronically. This chapter provides an overview of how transactions are processed in a computerised AIS. This is the last chapter in this book where we include a detailed description of the process of accounting for GST.

7.1 EFFECTIVE ACCOUNTING INFORMATION SYSTEMS

Modern computerised accounting systems have become highly sophisticated, making it possible to process vast amounts of data and to integrate accounting information with other types of information for management decision making. Small and medium-sized firms such as Smart Touch and Greg's Tunes tend to use software packages marketed by the likes of MYOB and Xero, whereas larger organisations may invest in **enterprise resource planning (ERP)** systems such as SAP, in which the accounting system is a module along with plant management, human resources, production and other systems. These ERP systems are integrated systems, in that the accounting effects of each module are automatically captured and stored for subsequent processing on a real-time basis. However, whether accounting information is produced by MYOB, Xero, SAP or simply manually, the principles of an *effective AIS* remain the same and you should understand what these are.

Good accounting systems—whether computerised or manual—include four essential elements: *control, compatibility, flexibility* and a favourable *cost–benefit relationship*.

LO 1

Identify the four essential elements of an effective accounting information system

Features of effective systems

Control   Managers need control over operations. *Internal controls* (which are discussed further in Chapter 8) are the methods and procedures used to authorise transactions, safeguard assets and ensure the integrity of accounting reports. For example, in firms such as Smart Touch, Woolworths, JB Hi-Fi and BHP, managers control cash disbursements in order to avoid theft through unauthorised payments. VISA and MasterCard keep records of their accounts receivable to ensure that they receive collections on time.

Compatibility   A *compatible* system is one that works smoothly with the business's operations, personnel and organisational structure. An example can be seen in Westpac, which is organised as a network of branch offices. Westpac's top managers want to know revenues in each region where the bank does business. They also want to analyse loans in different geographical regions. If revenues in Western Australia are lagging, managers can concentrate their efforts in that state. They may relocate some branch offices or hire new personnel.

Flexibility   Organisations evolve. They develop new products, sell off unprofitable operations and acquire new ones, and adjust employee pay scales. Changes in the business often call for changes in the accounting system. A well-designed system is *flexible* if it accommodates changes without a complete overhaul.

Cost–benefit relationship   Control, compatibility and flexibility cost money. Managers strive for a system that offers maximum benefits at a minimum cost—that is, a favourable *cost–benefit relationship*. Most small businesses use off-the-shelf computerised accounting packages, and the very smallest might not computerise at all. But large businesses, such as banks, have specialised needs for information. For them, custom programming is a must. The benefits—in terms of information tailored to the firm's needs—far outweigh the costs. The result? Better decisions.

Components of a computerised accounting system

Apart from personnel, two components make up the heart of a computerised accounting system:

■ hardware, and
■ software.

Each component is critical to the system's success.

Hardware is the electronic equipment that includes computers, monitors, printers and the network that connects them. Most modern accounting systems require a **network**, the system of electronic linkages that allows different computers to share the same information. In a networked system, the **server** stores the program and the data. With a network, a PwC auditor in London can access the data of a client located in Sydney or Auckland. The result is a speedier audit for the

client, often at lower cost than if the auditor had to perform all the work on site in Sydney or Auckland.

Software is the set of programs that drive the computer to perform the work desired. Accounting software accepts, edits (alters) and stores transaction data, and generates the reports that managers use to run the business. Many accounting software packages operate independently from the other computing applications of the system. For example, a business that is only partly computerised may use software to account for employee payrolls and sales and accounts receivable, while the other parts of the accounting system remain manual operations.

The accounting software stores all data in a **database**, or integrated storehouse of data. Many ERP systems process both accounting and non-accounting data.

7.2 HOW ACCOUNTING SYSTEMS WORK

Computerised accounting systems have replaced manual systems in most organisations—even small businesses. However, even in computerised systems some manual accounting processes are adopted, especially where business are small, because the computer-based systems sometimes involve overkill for sets of simple transactions. As we discuss the three stages of data processing, observe the differences between a computerised system and a manual system. The relationship between the three stages of data processing is shown in Exhibit 7-1.

Inputs *Inputs* represent data from business processes such as sales, returns, cash receipts, orders and other events. Inputs are usually grouped by type. For example, a firm would enter sale transactions separately from cash receipts and purchase transactions.

Processing In a manual system, *processing* includes journalising transactions, posting to the ledger accounts and preparing the financial statements. A computerised system captures and stores transactions in a database for subsequent processing and reporting.

Outputs *Outputs* are the reports used for decision making, including the financial statements (income statement, balance sheet and so on). Business managers can make better decisions with the information produced from their accounting systems. Exhibit 7-2 gives an overview of a computerised accounting system. In tracing the flow of information, start with data inputs in the lower left corner.

Designing an accounting system: the chart of accounts

An accounting system begins with the chart of accounts. The purpose of the chart of accounts is to determine the content and detail of the accounting reports. In the accounting system of a large, complex business such as JB Hi-Fi, account numbers take on added importance. It is efficient to represent a complex account title, such as Accumulated depreciation—equipment, with a concise account number (for example, 12570).

EXHIBIT 7-1 The three stages of data processing

| Inputs | Processing | Outputs |
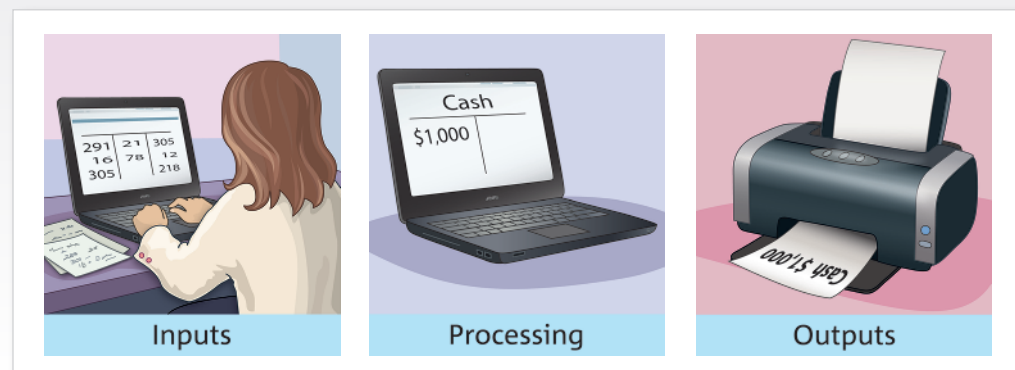
EXHIBIT 7-2 Overview of a computerised accounting system
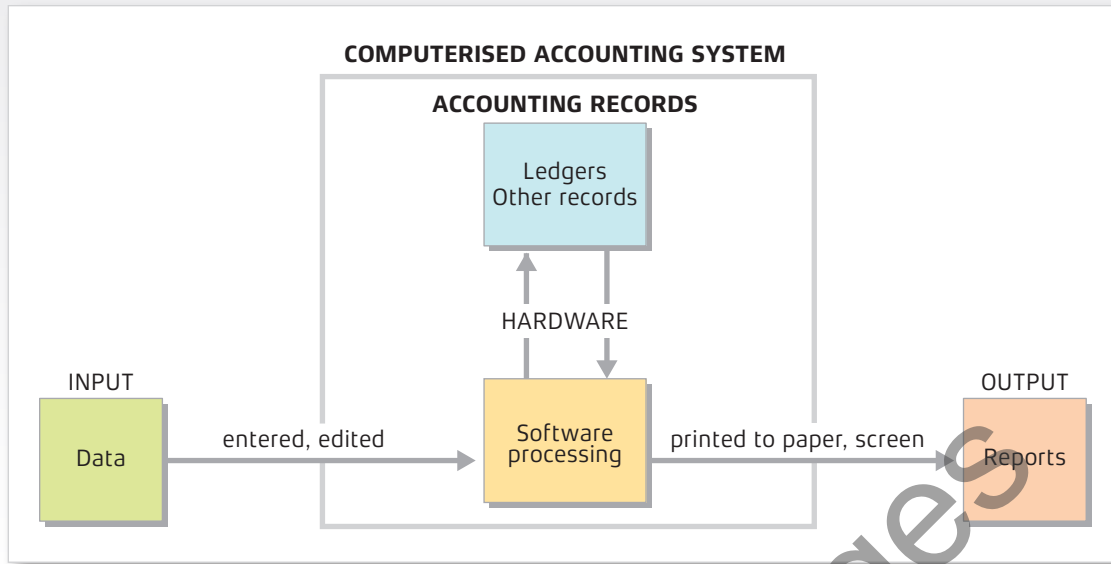

Recall from Chapter 2 that asset accounts generally begin with the digit 1, liabilities with the digit 2, owners' equity accounts with 3, revenues with 4 and expenses with 5. Exhibit 7–3 illustrates one structure for computerised accounts. Assets are divided into the accounts Current assets, Tangible non–current assets (for example, property, plant and equipment) and Other non–current assets. For the current assets, we illustrate only three general ledger accounts: Cash (account no. 111), Accounts receivable (no. 112) and Prepaid insurance (no. 115).

The account numbers in Exhibit 7–3 get longer and more detailed as you move from top to bottom. For example, Customer A's account number is 1120001, in which 112 represents Accounts receivable and 0001 refers to Customer A.

EXHIBIT 7-3 Structure for computerised accounts
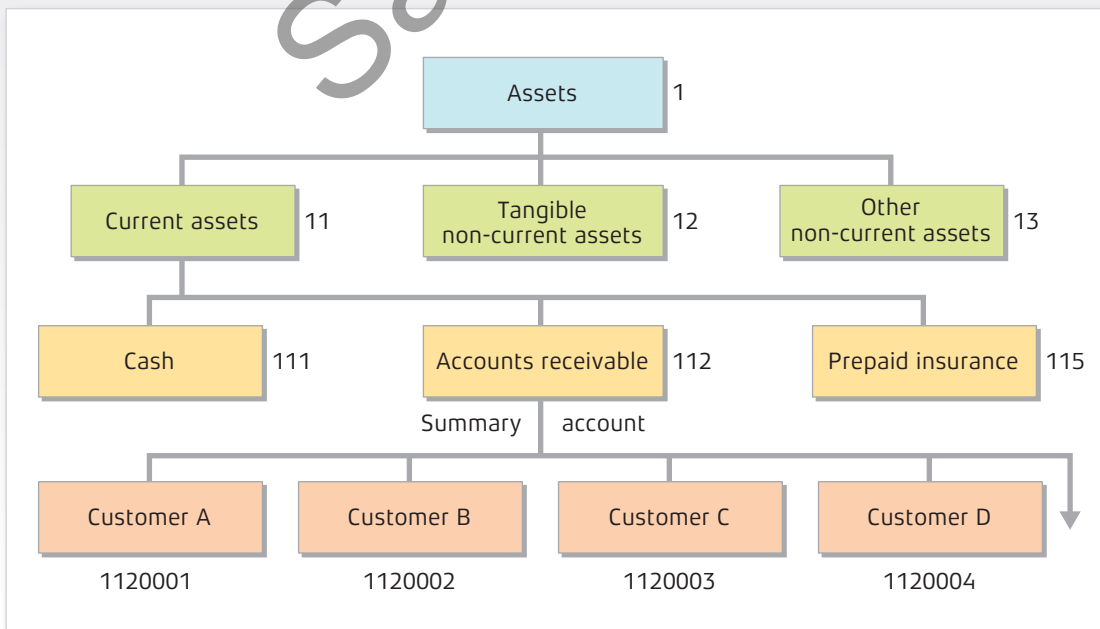
Computerised accounting systems rely on account *number ranges* and account *classifications* (see the next section) to translate accounts and their balances into properly organised financial statements and other reports. For example, the accounts numbered 101–399 (assets, liabilities and owners' equity) are reported in the balance sheet, while the accounts numbered 401–599 (revenues and expenses) go to the income statement.

Processing transactions: manual and menu-driven systems

Recording transactions in a manual accounting system requires an additional step that we have skipped thus far in this book. A business of any size *classifies* transactions by type for efficient handling. In a manual system, credit sales, purchases on credit, cash receipts and cash payments are treated as four separate categories, with each type entered into its own special journal. For example:

- Credit sales are recorded in a special journal called a *sales journal*.
- Cash receipts are entered into a *cash receipts journal*.
- Credit purchases of inventory and other assets are recorded in a *purchases journal*.
- Cash payments are entered in a *cash payments journal*.
- Transactions that don't fit any of the special journals, such as the adjusting entries at the end of the period, are recorded in the *general journal*, which serves as the 'journal of last resort'.

In a manual system, transactions are posted from these journals to the ledger.

Computerised systems are organised by business cycle. Access to functions is arranged in terms of menus. A **menu** is a list of options for choosing computer functions. In a menu–driven system you first access the most general group of functions, called the *main menu*. You then choose from one or more sub-menus until you finally reach the function you want.

Exhibit 7-4 illustrates one type of menu structure. The computer user clicks on the menu items to drill down to the desired action. In this example, he/she has clicked down the path Accounting > Financial Accounting > General Ledger, revealing options to create, change or display master records, post general ledger journal entries, display journal entries, review account postings, and produce various reports. The user has clicked on 'Post GL Journal Entry' (as shown by the purple highlighting).

In a computerised system, transactions are captured either electronically or manually and stored in a database for subsequent processing and retrieval. The transaction data are retrieved from the database to produce financial statements, which can be printed automatically, at any time, for any given time period, as the need arises.

EXHIBIT 7-4 Main menu of a computerised accounting system
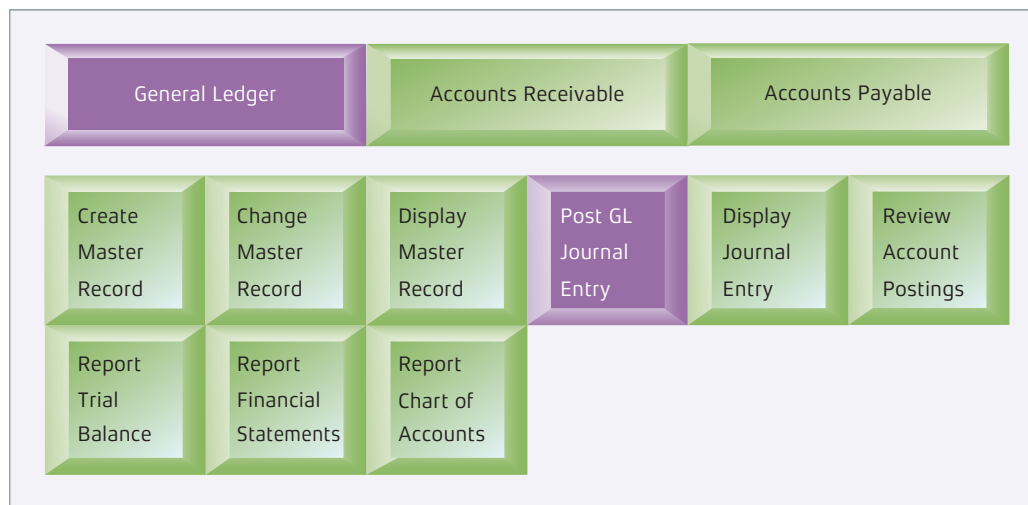
Enterprise resource planning systems

ERP systems, used by some large organisations, were described earlier in this chapter. ERP systems such as SAP and Oracle can capture and store data from multiple sources into a single integrated database for all of a firm's business activities—from purchasing to production to customer service.

Advantages of ERP systems include:

- Centralised systems can save money.
- The impact of changes in one part of the organisation are automatically reflected elsewhere—in purchasing, delivery, inventory, personnel, plant management and accounting systems.
- Separate 'legacy' systems, such as those for payroll and sales, are unnecessary.

However, ERP systems are expensive to purchase, implement and maintain. Implementation requires a great deal of time and money. Many organisations in both the private and public sectors have spent very large amounts of money on ERP systems, with little return. The main reasons for ERP implementation issues have been failure to clearly identify the user requirements, leading to poor system design, and underestimation of the time and cost of implementation and staff training.

The remainder of this chapter describes how transactions are processed in a computerised accounting system and includes treatment of the GST account. This will be the last time that we include a detailed account of GST in examples and exercises in this book. It is necessary to complete your understanding of the way GST is dealt with in accounting systems, but we don't want to obscure or unnecessarily complicate your appreciation of the fundamental accounting issues dealt with in later chapters with routine GST accounting entries.

Sustainability in action

State of integrated and sustainability reporting in 2018

Sustainability reporting for large public companies around the world has become the norm. Research carried out by the Sustainable Investments Institute (Si2) in 2018 found that 78% of the S&P 500 companies issued a sustainability report for the most recent reporting period, most with environmental and social performance metrics. The rate of sustainability reporting for the world's largest companies is even higher, with some figures noting as high as 93%. This is a starkly different picture from the 1980s, when a handful of companies in vulnerable sectors—extractives and chemicals, which had to respond to public backlash against environmental mishaps—were the only ones to publish environmental reports with limited performance metrics. It was not until the 1990s that sustainability reports as we know them today started gaining traction, after the concept of 'triple bottom line'—environmental, social and economic—corporate performance was introduced and became popular.

Integrated reporting reflects a critical point in the evolution of financial accounting practice. Its core purpose is to en-sure that organizations provide a more accurate account of their creation or destruction of value among the different forms of capital. It achieves this by shifting the focus away from the traditional exclusivity of financial measurement.

— Dr. Robert Massie (Co-founder), Global Reporting Initiative

Source: Adapted from Jon Lukomnik (Investor Responsibility Research Institute), 'State of Integrated and Sustainability Reporting 2018', Harvard Law School Forum on Corporate Governance, 3 December 2018, https://corpgov.law.harvard.edu/2018/12/03/state-of-integrated-and-sustainability-reporting-2018/.

QUESTIONS TO THINK ABOUT

What kind of additional 'primary' data would you expect to see being integrated into existing accounting systems? Would it need to be valued in monetary terms? Would it be, or could it be, part of the double-entry system? What might such information tell you about sustainability? Do you think such information would be useful to corporate managers and other stakeholders?

7.3 GENERAL LEDGER JOURNAL ENTRIES

As we discussed in earlier chapters, journal entries are posted to the ledger as debit and credit changes to the accounts. The main ledger used to produce the financial statements is the **general ledger**. This ledger has an account for each item that appears in the balance sheet or income statement for the business.

Transactions are classified by type, e.g. cash receipts from customers, and entered through the associated menu option, e.g. accounts receivable. Accounts receivable transactions update the business's detailed record of customers' accounts (or '**subsidiary ledger**)', but also update the Cash and Accounts receivable accounts in the general ledger. Those transactions directly affecting the general ledger and not affecting a subsidiary ledger are entered through a menu option such as the 'Post GL Journal Entry' menu option shown in Exhibit 7-4.

Each general ledger journal entry consists of at least debit and one credit posting. A journal entry must balance, with the debits equalling the credits, and is assigned a reference number so that postings can be traced back to their source.

Each general ledger account is assigned an account number (e.g. 111 for Cash). Each account has a master record, which stores relatively permanent information about the account. This includes:

- account number
- account name
- account type—income statement or balance sheet
- period opening balance
- GST tax category.

The menu options for master records in Exhibit 7-4 are 'Create', 'Change' and 'Display'—new master records may be created, and existing ones may be updated or viewed.

In a master record, the account type is used to distinguish which accounts are to be included in each of the two financial statements. The Cash account in Exhibit 7-5 will appear in the balance sheet. A '**control account**' (such as Accounts receivable) that summarises the balances in the related subsidiary ledger has an indicator in the master record, determining whether this account can be posted to directly or only through the special module for its subsidiary ledger. This ensures that subsidiary ledgers always balance with their control account. The period opening balance is used for display and reporting. The GST tax category controls the type of GST code that must be provided to the account. A cleaning expense account would require an input tax code; sales revenue would require an output tax code. Only income statement accounts require a GST tax category to be set. The asterisks in the second column of Exhibit 7-5 show the choices that have been made.

EXHIBIT 7-5 General ledger master record

GL Master Record

GL Account No. 111		Cash	Period open. bal. $12 900.00
Control			
Account type	*	Balance sheet	
		Income statement	
Control account		Yes	
	*	No	
GST tax category		Input	
		Output	
	*	None	

Making a general ledger journal entry

When recording a general ledger journal entry, at least one debit and one credit posting must be entered. After choosing the menu option 'Post GL journal entry', the following 'header' data are entered first:

- journal entry reference (unique identifying number for the transaction)
- date
- narration.

For each debit or credit posting, the following 'detailed' data are then entered:

- general ledger posting reference (general ledger account number to be posted to)
- account name (retrieved automatically by the software)
- debit/credit indicator
- gross amount
- GST tax code (if applicable).

The accounting software ensures that only valid data are entered and that the debits equal the credits for a journal entry. Once the user posts the entered data, it is stored in a database and provides the basis for displaying or reporting a list of general journal entries, the postings to specific accounts, or a summary of account balances (trial balance). The current balance for a chosen account is generated by the accounting software using the period opening balance and the debit or credit postings to that account since the beginning of the financial year. A general ledger journal entry to record a contribution of cash by the owner is shown in Exhibit 7-6.

The remaining general ledger options shown in Exhibit 7-4 use data stored in the database; they allow the user to query a journal entry based on its journal entry reference number, display the postings to a specified account, or generate standard reports from the general ledger, including a trial balance and financial statements. Exhibit 7-7 shows the postings to the Cash account (from

EXHIBIT 7-6 A general ledger journal entry

Enter GL Journal Entry

Date	18/07/2021	Balance info	
Journal Entry Ref	1236	Total debits	750.00
Narration	Contribution of cash by owner	Total credits	750.00

GL Posting Ref	Account Name	Debit/Credit	Amount	Tax Code
111	Cash	Debit	750.00	
311	Owner's capital	Credit	750.00	

POST

EXHIBIT 7-7 Postings to the Cash account

Account Postings

GL Account No. 111 Cash					
Date	Journal Entry Ref	Narration	Debit	Credit	Balance
01/07/2021		Period opening balance			12 900.00
18/07/2021	1236	Contribution of cash by owner	750.00		13 650.00

Exhibit 7-6) and this account's current balance, accessed by choosing the menu option 'Review Account Postings' in Exhibit 7-4. Credit balances would be shown as negative amounts.

7.4 ACCOUNTS RECEIVABLE TRANSACTIONS

LO 4

Describe how accounts receivable transactions are entered and processed

As indicated above, some general ledger accounts are control accounts. They summarise the transactions and balances of the related subsidiary ledger. Accounts receivable is a control account summarising customer transactions. Transactions that affect accounts receivable are:

- credit sales
- cash receipts from customers
- sales returns.

In the Accounts receivable subsidiary ledger, there is a master record with a unique customer number for each customer. This is maintained using the menu option Accounts Receivable > Change Master Record (Exhibit 7-8).

Exhibit 7-9 shows the customer master record for Newman Furniture (customer number 1120001). The record shows relatively permanent data for each customer:

- customer number
- customer name
- period opening balance
- address
- control account
- terms of payment
- payment method.

The period opening balance is the amount owing by the customer at the beginning of the accounting period. Address data allow the business to correspond with the customer formally, and send customer statements.

The control account is specified within the customer master record, indicating which general ledger account summarises this customer's transactions and balance. When transactions are posted to a customer in the subsidiary ledger, they are also posted to the corresponding control account in the general ledger, thereby preserving the balance between the control account and the subsidiary ledger. Separate control accounts can be maintained for different categories of customers, such as domestic/international, or state/territory.

EXHIBIT 7-8 Accounts receivable menu options
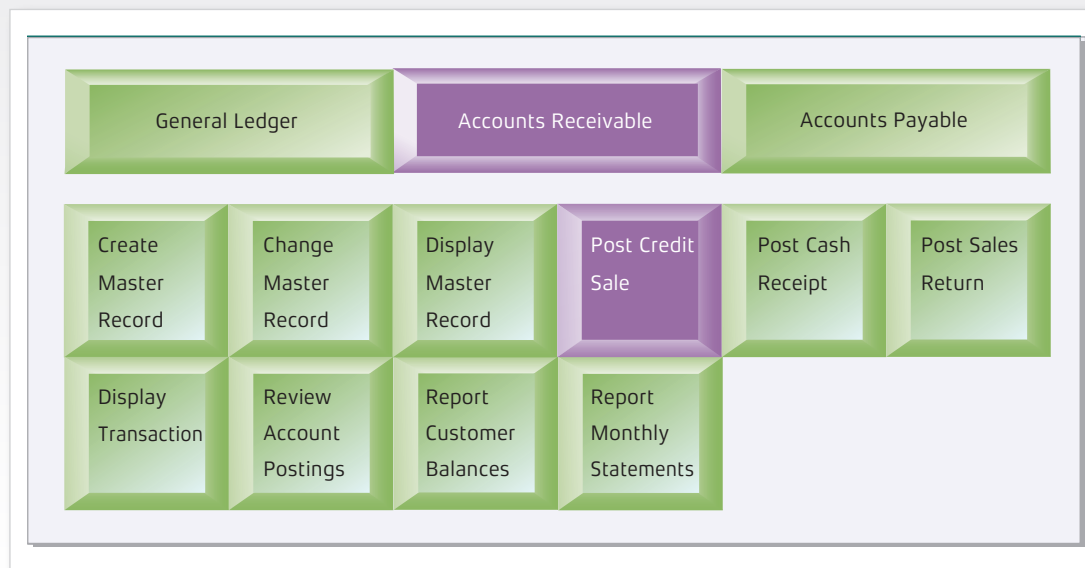
EXHIBIT 7-9 Master record for a customer

Customer Master Record

Customer No. 1120001		Period open. bal. $2 500.00
Name	Newman Furniture	
Address		
Street/No.	Old Cleveland Road	1645
Postcode/City	4155	Chandler
Country	Australia	
Telephone	+617 3899 2345	
Accounting Info		
Control account	112	Accounts receivable
Payment		
Terms of payment	G002	2/10, n/30
Payment method		

EXHIBIT 7-10 Posting a credit sale transaction

Enter Credit Sale

Date	31/07/2021		
Trans Ref No.	3648		
Customer No.	1120001		
	Newman Furniture		
	1645 Old Cleveland Road		
	Chandler 4155 Australia		
Terms of payment	2/10, n/30		

GL Posting Ref	Account Name	Debit/Credit	Amount	Tax Code
400001	Consulting revenue	Credit	1 000.00	Output10

POST

The terms of payment code, such as G002 (representing 2/10, n/30), allows the accounting software to automatically approve and post discounts for prompt payment by the customer. Payment method may be used to indicate that the customer will pay by direct debit to their bank account. This has to be approved by the customer.

Exhibit 7–10 illustrates the posting of a credit sale transaction involving the provision of consulting advice to Newman Furniture. The accounts receivable clerk navigates the main menu and clicks on the 'Post Credit Sale' menu option shown in Exhibit 7-8. The following data are then entered:

- date of transaction
- transaction reference number

- customer number (customer account to be debited)
- customer name (retrieved automatically by the software)
- customer address (retrieved automatically by the software)
- terms of payment (retrieved automatically by the software)
- general ledger posting reference (general ledger account to be credited)
- gross amount
- GST tax code.

The general ledger account to be credited for this transaction is 400001 Consulting revenue. The GST tax code Output10 is entered, which is an output GST code specifying that 10% GST is to be added to the gross amount to generate the total amount owing by the customer. The accounting software generates the journal entry shown in Exhibit 7-11, which is then posted to the subsidiary and general ledgers.

EXHIBIT 7-11 Automatic posting of credit sale

Automatic Posting of Credit Sale

Date	31/07/2021		Balance info	
Trans Ref No.	3648		Total debits	1 100.00
Customer No.	1120001		Total credits	1 100.00
	Newman Furniture			

GL/AR Posting Ref	Account Name	Debit/Credit	Amount	
112/1120001	Newman Furniture	Debit	1 100.00	
400001	Consulting revenue	Credit	1 000.00	
220001	GST clearing	Credit	100.00	

Transaction data such as these are also used to display and report on individual customers.

Exhibit 7-12 illustrates the posting of a cash receipt of $1 078.00 from Newman Furniture. The accounts receivable clerk navigates the main menu and double-clicks on the 'Post Cash Receipt' menu option shown in Exhibit 7-8. The following data are then entered:

- date of transaction
- transaction reference number
- customer number (customer account to be credited)
- customer name (retrieved automatically by the software)
- customer address (retrieved automatically by the software)
- terms of payment (retrieved automatically by the software)
- bank account (to be debited)
- amount received.

The accounting software displays credit sales for the customer. In this case, there is only one credit sale. A discount of 2% is proposed by the software based on the terms of payment. The clerk clicks on 'POST' to accept this proposal.

The accounting software generates the journal entry in Exhibit 7-13, which is then posted to the subsidiary and general ledgers. This journal entry automatically adjusts the GST on the transaction for the 2% discount. The terms of payment allowed a $22 discount for prompt payment, and Newman Furniture paid within the discount period. The cash receipt is recorded by debiting Cash for $1 078, Sales discount for $20 and GST clearing for $2 (= 1/11 × 22), and by crediting Accounts receivable and the customer for $1 100.

EXHIBIT 7-12 Posting a cash receipt

Enter Cash Receipt

Date	05/08/2021		
Trans Ref No.	7823		
Customer No.	1120001		
	Newman Furniture		
	1645 Old Cleveland Road		
	Chandler 4155 Australia		
Terms of payment	2/10, n/30		
Bank account	111	Cash	
Amount	1 078.00		

Credit Sale Ref No	Date	Amount Owing	Tax Code	Discount Applied
3648	31/07/2021	1 100.00	Output10	22.00

POST

EXHIBIT 7-13 Automatic posting of cash receipt

Automatic Posting Of Cash Receipt

Date	05/08/2021		Balance info	
Trans Ref No.	7823		Total debits	1 100.00
Customer No.	1120001		Total credits	1 100.00
	Newman Furniture			

GL/AR Posting Ref	Account Name	Debit/Credit	Amount	
111	Cash	Debit	1 078.00	
518900	Sales discount	Debit	20.00	
220001	GST clearing	Debit	2.00	
112/1120001	Newman Furniture	Credit	1 100.00	

Exhibit 7–14 shows the postings to Newman Furniture's account as at 5 August, including an earlier cash receipt on 18 July.

EXHIBIT 7-14 Account postings for customers

Customer Account Postings

Customer No. 1120001 Newman Furniture					
Date	Trans Ref	Details	Debit	Credit	Balance
01/07/2021		Period opening balance			2 500.00
18/07/2021	6952	Cash		2 500.00	0.00
31/07/2021	3648	Consulting revenue	1 100.00		1 100.00
05/08/2021	7823	Cash		1 100.00	0.00

As we saw in Chapter 5, customers sometimes return goods to the seller, and sellers grant sales allowances to customers because of product defects and for other reasons. The effect of sales returns and sales allowances is the same—both decrease net sales. The document issued by the seller for a credit to the customer's account receivable is called a **credit note**, or **credit memo**, because the business gives the customer credit for the returned goods. When a business issues a credit note, it debits Sales returns and allowances and GST clearing, and credits Accounts receivable and the customer. The posting of credit notes using accounting software is similar to posting cash receipts.

This section described the entry and posting of accounts receivable transactions. Credit sales involving consulting revenue were explained. Where sales of inventory are involved, there are consequential postings to Cost of sales and Inventory. This is examined in later courses on accounting information systems.

7.5 ACCOUNTS PAYABLE TRANSACTIONS

LO 5

Describe how accounts payable transactions are entered and processed

Similar to Accounts receivable, Accounts payable is also a control account in the general ledger summarising creditor transactions and balances. Transactions that affect accounts payable are:

■ credit purchases

■ cash payments to creditors

■ purchases returns.

In the Accounts payable subsidiary ledger, there is a master record with a unique creditor number for each creditor. This is maintained using the menu options Accounts Payable > Change Master Record (Exhibit 7-15).

Exhibit 7-16 shows the customer master record for City Office Supply (creditor number 2220001). Each record shows relatively permanent data for each creditor:

■ creditor number

■ creditor name

■ period opening balance

EXHIBIT 7-15 Accounts payable menu options
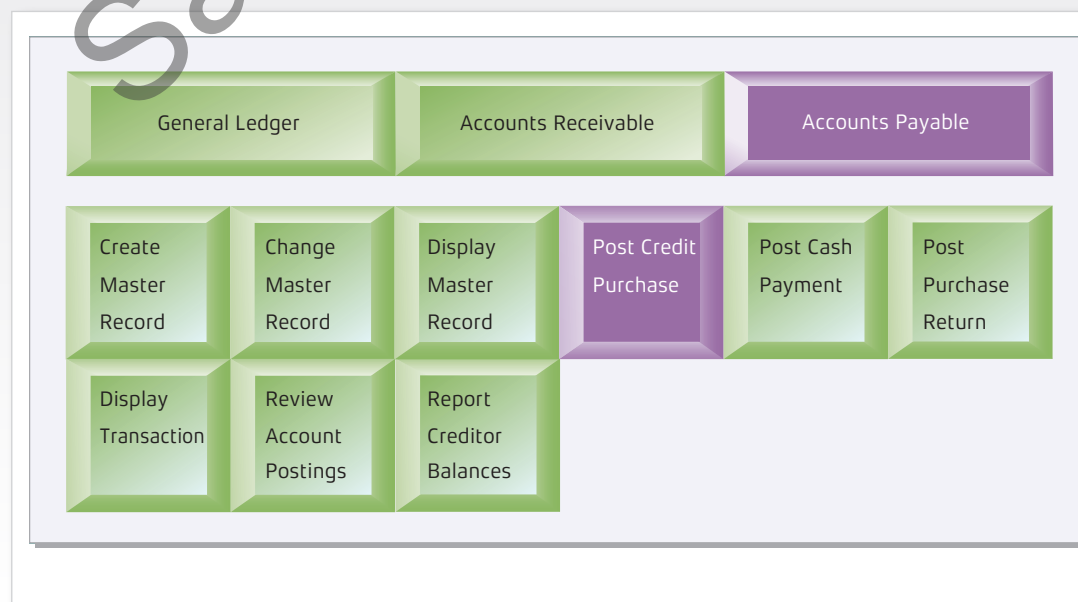
EXHIBIT 7-16 Master record for a creditor

Creditor Master Record

Creditor No. 2220001		Period open. bal. $(1 400.00)
Name	City Office Supply	
Address		
Street/No.	Mains Road	789
Postcode/City	4000	Brisbane
Country	Australia	
Telephone	+617 3219 4563	
Accounting Info		
Control account	222	Accounts payable
Payment		
Terms of payment	G005	2/10, n/30
Payment method		

- address
- control account
- terms of payment
- payment method.

The period opening balance is carried forward from the prior financial year, $(1 400) indicating a credit balance. Address data allow the business to correspond with the creditor formally.

The control account is specified within the creditor master record, indicating which general ledger account summarises this creditor's transactions and balance. When transactions are posted to a creditor in the subsidiary ledger, they are also posted to the corresponding control account in the general ledger, thereby preserving the balance between the control account and the subsidiary ledger. Separate control accounts can be maintained for different categories of creditors.

The terms of payment code, such as G005 (representing 2/10, n/30), allows the accounting software to automatically approve and post discounts for prompt payment to the creditor.

Exhibit 7-17 (overleaf) illustrates the posting of a credit purchase transaction for office supplies from City Office Supply. The accounts payable clerk navigates the main menu and double-clicks on the 'Post Credit Purchase' menu option shown in Exhibit 7-15. The following data are then entered:

- date of transaction
- transaction reference number
- creditor number (creditor account to be credited)
- creditor name (retrieved automatically by the software)
- creditor address (retrieved automatically by the software)
- terms of payment (retrieved automatically by the software)
- general ledger posting reference (general ledger account to be debited)
- gross amount
- GST tax code.

The general ledger account to be debited for this transaction is 500501 Office supplies. The GST tax code Input10 is entered, which is an input GST code specifying that 10% GST is to be added to the gross amount to generate the total amount owing to the creditor. The accounting software

EXHIBIT 7-17 Posting a credit purchase transaction

Enter Credit Purchase

Date	31/07/2021		
Trans Ref No.	2748		
Creditor No.	2220001		
	City Office Supply		
	789 Mains Road		
	Brisbane 4000 Australia		
Terms of payment	2/10, n/30		

GL Posting Ref	Account Name	Debit/Credit	Amount	Tax Code
500501	Office supplies	Debit	500.00	Input10

POST

EXHIBIT 7-18 Automatic posting of credit purchase

Automatic Posting of Credit Purchase

Date	31/07/2021	Balance info	
Trans Ref No.	2748	Total debits	550.00
Creditor No.	2220001	Total credits	550.00
	City Office Supply		

GL/AP Posting Ref	Account Name	Debit/Credit	Amount	
500501	Office supplies	Debit	500.00	
220001	GST clearing	Debit	50.00	
222/2220001	City Office Supply	Credit	550.00	

generates the journal entry in Exhibit 7-18, which is then posted to the subsidiary and general ledgers. The transaction data can then be used for display and reporting.

Exhibit 7-19 illustrates the posting of a cash payment of $539.00 to City Office Supply. The accounts payable clerk navigates the main menu and double-clicks on the 'Post Cash Payment' menu option shown in Exhibit 7-15. The following data are then entered:

- date of transaction
- transaction reference number
- creditor number (creditor account to be debited)
- creditor name (retrieved automatically by the software)
- creditor address (retrieved automatically by the software)
- terms of payment (retrieved automatically by the software)
- bank account (to be credited)
- amount paid.

EXHIBIT 7-19 Posting a cash payment

Enter Cash Payment

Date	05/08/2021		
Trans Ref No.	6102		
Creditor No.	2220001		
	City Office Supply		
	789 Mains Road		
	Brisbane 4000 Australia		
Terms of payment	2/10, n/30		
Bank account	111	Cash	
Amount	539.00		

Credit Purchase Ref No	Date	Amount Owing	Tax Code	Discount Applied
2748	31/07/2021	550.00	Input10	11.00

POST

The accounting software displays credit purchases for the creditor. In this case, there is only one credit purchase. A discount of 2% is proposed by the software based on the terms of payment. The clerk clicks on 'POST' to accept this proposal.

The accounting software generates the journal entry in Exhibit 7-20, which is then posted to the subsidiary and general ledgers. This journal entry automatically adjusts the GST on the transaction for the 2% discount. The terms of payment allowed a $11 discount for prompt payment, and this payment is made within the discount period. The cash payment is recorded by crediting Cash for $539, Purchases discount for $10 and GST clearing for $1 (= $1/11 \times 11$), and by debiting Accounts payable and the creditor for $550.

Exhibit 7-21 (overleaf) shows the postings to City Office Supply's account.

The business also sometimes returns goods to its creditors. The effect of purchases returns and purchases allowances is the same—both decrease net purchases. The document issued by the

EXHIBIT 7-20 Automatic posting of cash payment

Automatic Posting of Cash Payment

Date	05/08/2021	Balance info	
Trans Ref No.	6102	Total debits	550.00
Creditor No.	2220001	Total credits	550.00
	City Office Supply		

GL/AP Posting Ref	Account Name	Debit/Credit	Amount	
222/2220001	City Office Supply	Debit	550.00	
429343	Purchases discount	Credit	10.00	
220001	GST clearing	Credit	1.00	
111	Cash	Credit	539.00	

EXHIBIT 7-21   Account postings for a creditor

Creditor Account Postings

Creditor No. 2220001 City Office Supply

Date	Trans Ref	Details	Debit	Credit	Balance
01/07/2021		Period opening balance			(1 400.00)
18/07/2021	5652	Cash	1 400.00		0.00
31/07/2021	2748	Office supplies		550.00	(550.00)
05/08/2021	6102	Cash	550.00		0.00

purchaser for a debit to the creditor's account payable is called a **debit note**, or **debit memo**. When a business issues a debit note, it credits Purchases returns and allowances and GST clearing, and debits Accounts payable and the creditor. The posting of debit notes using accounting software is similar to posting cash payments.

This section described the entry and posting of accounts payable transactions. Credit purchases involving office supplies were explained. Where purchases of inventory are involved, there is consequential posting to Purchases and Inventory. This is examined in later courses on accounting information systems.

Balancing the ledgers

When a business uses accounting software, equality should exist between:

1   *General ledger:*

Total debits = Total credits of all account balances

---

2   *General ledger and Accounts receivable subsidiary ledger:*

| **Balance of Accounts receivable control account** | **=** | **Sum of individual customer account balances in the accounts receivable subsidiary ledger** |

---

3   *General ledger and Accounts payable subsidiary ledger:*

| **Balance of Accounts payable control account** | **=** | **Sum of individual creditor account balances in the accounts payable subsidiary ledger** |

The process of ensuring that these equalities exist is called *balancing the ledgers* or *proving the ledgers*. It is an important control procedure because it helps to ensure the accuracy of the accounting records. It is a routine process in manual accounting system environments, but automated in a computerised environment.

Decision Guidelines 7.1 focuses on major decisions that accountants make as they use an accounting information system.

DECISION GUIDELINES 7.1

Using an accounting information system

| DECISION	GUIDELINES

What are the main components of an accounting system?	Journal entries
	Ledgers:
	• General ledger
	• Subsidiary ledgers:
	  – Accounts receivable
	  – Accounts payable

Where to record: • sales on credit • credit receipts • purchases on credit • cash payments • all other transactions	Menu option: • Post Credit Sale • Post Cash Receipt • Post Credit Purchase • Post Cash Payment • Post GL Journal Entry

How does the general ledger relate to the subsidiary ledgers?

GENERAL LEDGER

Accounts receivable	**Accounts payable**
XXX	XX

SUBSIDIARY LEDGERS

ACCOUNTS RECEIVABLE FROM: ACCOUNTS PAYABLE TO:

Arnold	**Barnes**	**Agnew**	**Black**
XX	XX	X	X
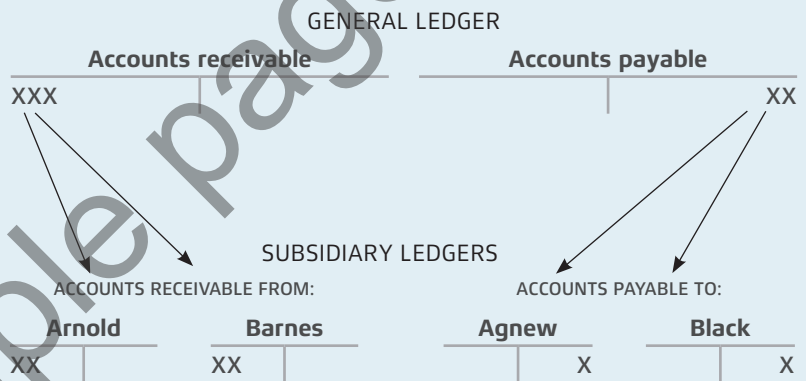
When to post transactions to:
- general ledger — immediately
- subsidiary ledger — immediately

How to achieve control over:

	General ledger		Subsidiary ledger
• Accounts receivable	Accounts receivable	=	Sum of individual *customer* account balances
• Accounts payable	Accounts payable	=	Sum of individual *creditor* account balances

EXCEL EXERCISE 7.1

Goal: Create an Excel worksheet to prepare an income statement and balance sheet for a start-up business.

Scenario: You have started a valet parking business called First Class Valet. Although a computerised accounting system is beyond your current means, you have tracked your cash, supplies, revenues, expenses and other items in a spreadsheet. The totals for each account at the end of your first month are shown on the following page (ignore GST).

1 Revenues, $400.

2 Supplies on hand, $175.

3 Cash, $300.

4 Supplies expense, $225.

5 (Your name), capital, beginning of month, $250.

6 Accounts payable, $50.

In a new worksheet, prepare an income statement and balance sheet that show the results of your new business's activity at the end of its first month. When finished, answer these questions:

1 How well did your business do in its first month of operations? How did this affect your Capital account?

2 If you were to expand your business and hire an employee to assist with next month's parking engagements, what additional accounts might appear on next month's statements?

STEP-BY-STEP

1 Open a new Excel worksheet.

2 Create a bold-faced heading for your worksheet that contains the following:

   a Chapter 7 Excel Exercise

   b First Class Valet

   c today's date

3 Using the Chapter 3 Excel exercise as a model, create an income statement and a balance sheet containing the accounts listed above, as well as any others you think are required.

4 Save your work with a suitable filename.

SUMMARY PROBLEM 7.1

Houlihan Consulting completed the following selected transactions during March 2021 (sales transactions are exclusive of GST):

Mar 4	Charged on account for consulting services to Melinda Fultz for $500, on terms of 2/10, n/30.
6	Received $646.80 on account from Brad Lee. The full invoice amount was $660, but Lee paid within the discount period to gain the 2% discount.
15	Charged on account for consulting services to Lew Albert for $250, on terms of 2/10/, n/30.
27	Received $1 200 on account from Lew Albert. Payment was received after the discount period lapsed.

The general ledger showed the following balances at 28 February 2021: Cash, $1 117; Accounts receivable, $3 385; GST clearing, $940 (credit). The accounts receivable subsidiary ledger at 28 February contained debit balances as follows: Lew Albert, $1 840; Melinda Fultz, $885; and Brad Lee, $660. The GST rate is 10%.

REQUIREMENTS

1 Prepare the accounts in the general ledger (GL) and accounts receivable (AR) subsidiary ledger, including opening balances. Use the following account numbers: Cash, 10001; Accounts receivable, 10002; GST clearing, 20007; Consulting revenue, 40001; Sales discount, 50002; Lew Albert 1000201; Melinda Fultz 1000202; Brad Lee 1000203. Use the formats in Exhibit 7-7 and Exhibit 7-14.

2 Prepare journal entries for these transactions. Use the formats in Exhibits 7-11 and 7-13.

3 Post to the general ledger and the accounts receivable subsidiary ledger.

4 Show that the total of the customer balances in the subsidiary ledger equals the general ledger balance in Accounts receivable.

SOLUTION

Note that the solution to Requirement 1 is given together with that for Requirement 3.

Requirement 2

TRANSACTION 4 MARCH

Date	4/03/2021	Balance info	
Trans Ref No.	3649	Total debits	550.00
Customer No.	1000202	Total credits	550.00
	Melinda Fultz		

GL/AR Posting Ref	Account Name	Debit/Credit	Amount
10002/1000202	Melinda Fultz	Debit	550.00
40001	Consulting revenue	Credit	500.00
20007	GST clearing	Credit	50.00

TRANSACTION 6 MARCH

Date	06/03/2021	Balance info	
Trans Ref No.	7824	Total debits	660.00
Customer No.	1000203	Total credits	660.00
	Brad Lee		

GL/AR Posting Ref	Account Name	Debit/Credit	Amount
10001	Cash	Debit	646.80
50002	Sales discount	Debit	12.00
20007	GST clearing	Debit	1.20
10002/1000203	Brad Lee	Credit	660.00

TRANSACTION 15 MARCH

Date	15/03/2021	Balance info	
Trans Ref No.	3650	Total debits	275.00
Customer No.	1000201	Total credits	275.00
	Lew Albert		

GL/AR Posting Ref	Account Name	Debit/Credit	Amount
10002/1000201	Lew Albert	Debit	275.00
40001	Consulting revenue	Credit	250.00
20007	GST clearing	Credit	25.00

TRANSACTION 27 MARCH

Date	27/03/2021	Balance info	
Trans Ref No.	7825	Total debits	1 200.00
Customer No.	1000201	Total credits	1 200.00
	Lew Albert		

GL/AR Posting Ref	Account Name	Debit/Credit	Amount
10001	Cash	Debit	1 200.00
10002/1000201	Lew Albert	Credit	1 200.00

Requirements 1 and 3

GENERAL LEDGER

GL Account No. 10001 Cash

Date	Trans Ref	Narration	Debit	Credit	Balance
01/03/2021		Period opening balance			1 117.00
06/03/2021	7824	Customer 1000203	646.80		1 763.80
27/03/2021	7825	Customer 1000201	1 200.00		2 963.80

GL Account No. 10002 Accounts Receivable

Date	Trans Ref	Narration	Debit	Credit	Balance
01/03/2021		Period opening balance			3 385.00
04/03/2021	3649	Customer 1000202	550.00		3 935.00
06/03/2021	7824	Customer 1000203		660.00	3 275.00
15/03/2021	3650	Customer 1000201	275.00		3 550.00
27/03/2021	7825	Customer 1000201		1 200.00	2 350.00

GL Account No. 20007 GST Clearing

Date	Trans Ref	Narration	Debit	Credit	Balance
01/03/2021		Period opening balance			(940.00)
04/03/2021	3649	Customer 1000202		50.00	(990.00)
06/03/2021	7824	Customer 1000203	1.20		(988.80)
15/03/2021	3650	Customer 1000201		25.00	(1013.80)

GL Account No. 40001 Consulting Revenue

Date	Trans Ref	Narration	Debit	Credit	Balance
01/03/2021		Period opening balance			0.00
04/03/2021	3649	Customer 1000202		500.00	(500.00)
15/03/2021	3650	Customer 1000201		250.00	(750.00)

GL Account No. 50002 Sales Discount

Date	Trans Ref	Narration	Debit	Credit	Balance
01/03/2021		Period opening balance			0.00
06/03/2021	7824	Customer 1000203	12.00		12.00

ACCOUNTS RECEIVABLE SUBSIDIARY LEDGER

Customer Account No. 1000201 Lew Albert

Date	Trans Ref	Details	Debit	Credit	Balance
01/03/2021		Period opening balance			1 840.00
15/03/2021	3650	Consulting revenue	275.00		2 115.00
27/03/2021	7825	Cash		1 200.00	915.00

Customer Account No. 1000202 Melinda Fultz

Date	Trans Ref	Details	Debit	Credit	Balance
01/03/2021		Period opening balance			885.00
04/03/2021	3649	Consulting revenue	550.00		1 435.00

Customer Account No. 1000203 Brad Lee

Date	Trans Ref	Details	Debit	Credit	Balance
01/03/2021		Period opening balance			660.00
06/03/2021	7824	Cash		660.00	0.00

Requirement 4

General ledger

Accounts receivable debit balance	$2 350

Accounts receivable subsidiary ledger: Customer accounts receivable

Customer	Balance
Lew Albert	$ 915
Melinda Fultz	1 435
Total accounts receivable	$2 350

REVIEW

Accounting vocabulary

accounting information system (p. 304)
control account (p. 310)
credit note or credit memo (p. 316)
database (p. 306)
debit note or debit memo (p. 320)
enterprise resource planning (ERP) (p. 305)
general ledger (p. 310)
hardware (p. 305)

journal entry (p. 304)
ledger (p. 304)
menu (p. 308)
network (p. 305)
server (p. 305)
software (p. 306)
subsidiary ledger (p. 310)

Student success tips

The following are hints on some common trouble areas for students in this chapter:

- Keep in mind that regardless of whether transactions are recorded manually or using a computerised accounting system, the basic rule that debits must equal credits still applies.

- Remember that each computer menu option is for recording one specific type of transaction.

ASSESS

Quick check

1 Which of the following benefits of an effective accounting information system provides safeguards for a business's assets and reduces the likelihood of fraud and errors?
   a Flexibility
   b Relevance
   c Control
   d Compatibility

2 The outputs of a computerised accounting information system are called:
   a reports
   b software
   c processing
   d purchase invoices

3 Mountain Day Spa sold merchandise inventory on credit to Marvin Smith, $400. Cost of sales was $250. When using a manual or computerised accounting information system, what is the appropriate journal entry to record the $250?
   a Debit to Accounts receivable, Credit to Sales revenue
   b Debit to Cash, credit to Sales revenue
   c Debit to Cost of sales, credit to Merchandise inventory
   d Debit to Cash, credit to Accounts receivable

4 Which of the following correctly describes the posting of credit sales transactions when using a computerised accounting information system?
   a Individual accounts receivable are posted daily to the general ledger
   b At the end of the month, the totals of sales are posted to the general ledger
   c Transactions are posted immediately to the general ledger and subsidiary ledger
   d Credit sales are credited to accounts in the accounts receivable subsidiary ledger

5 Centex Sound Systems purchased merchandise inventory costing $8 000 from Freeflow Company on account. Refer to the menus shown in Exhibits 7-8 and 7-15. Which menu option should Centex use to record this transaction, and what general ledger account is credited?
   a Post Cash Payment; credit Cash
   b Post Credit Purchase; credit Accounts payable
   c Post Credit Sale; credit Sales revenue
   d Post Cash Receipt; credit Merchandise inventory

6 Every cash payment transaction generates a:
   a credit to Cash
   b debit to Accounts receivable
   c debit to Sales discounts
   d debit to Cash

7 When using a computerised accounting information system, which of the following transactions would be recorded using the 'Post GL Journal Entry' menu option shown in Exhibit 7-4?
   a Depreciation of building
   b Payment of rent account
   c Sale of merchandise inventory on account
   d Purchase of merchandise inventory on account

8 Which is a disadvantage of an enterprise resource planning (ERP) system?
   a Helps companies adjust to changes
   b Can replace separate software systems
   c Can increase operating costs
   d Implementation requires a large commitment of time and people

Starters

S7-1 Evaluating features of an effective accounting information system

In Vogue, a T-shirt business, is growing fast and needs a better accounting information system. Consider the features of an effective system. Which features are most important? Why? Which feature must you consider if your financial resources are limited?

S7-2 Defining components of an accounting information system

LO 1

Match each example 1–7 of a computerised accounting information system with the component it belongs to. Components may be matched more than once.

Example	Component
1 Server	**A** Source documents and input devices
2 Cheques	**B** Processing and storage
3 Reports	**C** Outputs
4 Keyboard	
5 Software	
6 Financial statements	
7 Bar code scanner	

S7-3 Identifying types of transactions

LO 3, 4, 5

Use the following abbreviations to indicate the type of transaction and related menu option that you would use to record transactions a–l.

J = GL journal entry   P = Credit purchase
S = Credit sale   CP = Cash payment
CR = Cash receipt   PR = Purchase return
SR = Sales return

Transactions:
a Dividend revenue earned on an investment
b Prepayment of insurance
c Borrowing money on a long-term bill payable
d Purchase of equipment on credit
e Credit sale
f Payment of invoice for rent
g Sales return
h Purchase of merchandise inventory on account
i Collection of accounts receivable
j Expiration of prepaid insurance
k Sale on credit
l Payment on account

S7-4 Assigning account numbers

LO 2

Clarke Logistics uses the following account numbers.

151	301
191	311
201	411
281	531

Requirement

Assign an account number to each of the following accounts of Clarke Logistics.
a Jan Marks, drawings
b Service revenue
c Depreciation expense
d Inventory
e Accounts payable
f Jan Marks, capital

LO 3

S7-5 Identifying general ledger menu options

1 Refer to Exhibit 7-4. Explain the purpose of each general ledger menu option.
2 Log in to the computerised accounting software provided by your instructor, e.g. MYOB. Summarise the structure of the main menu, and locate the general ledger menu options that correspond to those in Exhibit 7-4. What differences can you identify?

LO 4

S7-6 Identifying accounts receivable menu options

1 Refer to Exhibit 7-8. Explain the purpose of each accounts receivable menu option.
2 Log in to the computerised accounting software provided by your instructor, e.g. MYOB. Summarise the structure of the main menu, and locate the accounts receivable menu options that correspond to those in Exhibit 7-8. What differences can you identify?

LO 5

S7-7 Identifying accounts payable menu options

1 Refer to Exhibit 7-15. Explain the purpose of each accounts payable menu option.
2 Log in to the computerised accounting software provided by your instructor, e.g. MYOB. Summarise the structure of the main menu, and locate the accounts payable menu options that correspond to those in Exhibit 7-15. What differences can you identify?

LO 4

S7-8 Recording a cash receipt

Refer to Summary Problem 7.1. Assume that customer Lew Albert paid his invoice from 15 March on 25 March, Prepare a journal entry for this cash receipt. Use the format in Exhibit 7-13.

LO 5

S7-9 Recording a credit purchase

Assume that Woodward Camping receives an invoice from Renewable Power on 10 June 2021 for electricity usage of $700 plus GST on terms of 2/10, n/30. Assuming that the rate of GST is 10%, prepare a journal entry for this credit purchase. Use the format in Exhibit 7-18.

LO 5

S7-10 Recording a cash payment

Refer to Starter S7-9. Assume that Woodward Camping pays the Renewable Power invoice of 10 June 2021 on 18 June. Prepare a journal entry for this cash payment. Use the format in Exhibit 7-20.

LO 3

S7-11 Identifying general ledger journal entries

What transactions may be recorded as a general ledger journal entry? Name at least three.

Exercises

LO 2

E7-1 Setting up a chart of accounts [5–10 min]

Use account numbers 101–106, 201, 221, 301, 321, 401, 501 and 521 to correspond to the following selected accounts from the general ledger of Mobile Technology. List the accounts and their account numbers in proper order, starting with the most liquid current asset.

James Mobile, capital	Depreciation expense	Accounts receivable
Cost of sales	Cash	Bill payable, non-current
Accounts payable	James Mobile, drawings	Computer equipment
Inventory	Supplies	
Sales revenue	Accumulated depreciation	

LO 2

E7-2 Using a trial balance [5–10 min]

The accounts of Lake Onondaga Steakhouse show some of these amounts before closing:

Total assets	$?	Lance Nolan, capital	$ 8 600
Current assets	18 100	Lance Nolan, drawings	2 000
Non-current assets	63 400	Total revenues	40 000
Total liabilities	?	Total expenses	21 000

Requirement

Calculate the missing amounts. You must also calculate ending owners' equity.

E7-3 Using a spreadsheet to calculate depreciation [5–10 min]

Equipment listed on a spreadsheet has a cost of $60 000; this amount is located in cell B9. The years of the asset's useful life (20) are found in cell C8. Write the spreadsheet formula to express annual depreciation expense for the equipment. How much is annual depreciation?

E7-4 Calculating financial statement amounts with a spreadsheet [5–10 min]

The following items appear in the cells of a Witt Furniture Store spreadsheet:

Item	Cell
Total assets	B22
Current assets	B8
Non-current assets	B11
Total liabilities	C11
Current liabilities	C6
Non-current liabilities	C10

Requirement

Write the spreadsheet formula to calculate Witt's:
a current ratio
b total owners' equity
c debt ratio.

E7-5 Recording credit sales [10–15 min]

LO 4

Assume that the following charges for professional services are to be recorded in May 2021:

Date	Trans ref	Customer (no.)	Gross amount (excl. GST)	Terms
May 7	191	L. Ewald (11204)	100.00	2/10, n/30
10	192	T. Ross (11245)	50.00	2/10, n/30
10	193	E. Lovell (11228)	60.00	2/10, n/30
12	194	B. Goebel (11244)	150.00	2/10, n/30

Requirement

Assume the following general ledger accounts: 111 Cash; 112 Accounts receivable; 215 GST clearing; 415 Service revenue; 534 Service discount. The GST rate is 10%.

Illustrate how these credit sales transactions would be recorded and posted in a computerised accounting information system, using the formats in Exhibits 7-10 and 7-11.

Note: Exercise E7-5 should be completed before E7-6.
E7-6 Recording cash receipts [10–15 min]

LO 4

Refer to the data in Exercise E7-5. Assume that the charges for professional services were recorded in May 2021.

Requirement

Assume the following general ledger accounts: 111 Cash; 112 Accounts receivable; 215 GST clearing; 534 Sales discount. The GST rate is 10%.

Illustrate how the following cash receipts would be recorded and posted in a computerised accounting information system, using the formats in Exhibits 7-12 and 7-13:

Date	Trans ref	Customer (no.)	Details
May 16	5432	B. Goebel (11244)	Paid invoice of 12 May, taking discount
25	5433	E. Lovell (11228)	Paid invoice of 10 May

LO 5

E7-7 Recording credit purchases [10–15 min]

Assume that Pilgrim Travel incurred the following charges during August 2021:

Date	Trans ref	Creditor (no.)	Gross amount (excl. GST)	Terms
Aug 9	371	Telstra (21209)	400.00	2/10, n/30
19	372	Bendigo City Council (21254)	650.00	2/10, n/30

Requirement

Assume the following general ledger accounts: 111 Cash; 212 Accounts payable; 215 GST clearing; 481 Purchases Discounts; 534 Telephone; 567 Rates. The GST rate is 10%.

Illustrate how these credit purchases transactions would be recorded and posted in a computerised accounting information system, using the format in Exhibits 7-17 and 7-18.

Note: Exercise E7-7 should be completed before Exercise E7-8.

LO 5

E7-8 Recording cash payments [10–15 min]

Refer to Exercise E7-7. Assume that Pilgrim Travel has recorded the following charges during August 2021:

Date	Trans ref	Creditor (no.)	Gross amount (excl. GST)	Terms
Aug 9	371	Telstra (21209)	400.00	2/10, n/30
19	372	Bendigo City Council (21254)	650.00	2/10, n/30

Requirement

Assume the following general ledger accounts: 111 Cash; 212 Accounts payable; 215 GST clearing; 481 Purchases Discounts; 534 Telephone; 567 Rates. The rate of GST is 10%.

Illustrate how the following cash payments would be recorded and posted in a computerised accounting information system, using the formats in Exhibits 7-19 and 7-20:

Date	Trans ref	Creditor (no.)	Details
Aug 12	9134	Telstra (21209)	Paid invoice of 9 August, taking discount
31	9135	Bendigo City Council (21254)	Paid invoice of 19 August

LO 5

E7-9 Identifying transactions from postings to the accounts payable subsidiary ledger [5 min]

A creditor's account in the accounts payable subsidiary ledger of Lyn Olson Materials follows. Describe the three posted transactions.

Creditor No. 212008 All Gas					
Date	Trans Ref	Details	Debit	Credit	Balance
01/07/2021		Period opening balance			(900.00)
13/07/2021	3412	Bank	900.00		0.00
20/07/2021	8727	Office supplies		550.00	(550.00)
31/07/2021	4002	Bank	550.00		0.00

E7-10 Identifying transactions from postings to general ledger accounts [5–10 min]

The GST clearing account in the general ledger of Best Vehicle Repairs follows. Describe the three posted transactions.

GL Account No. 20007 GST clearing					
Date	**Journal Entry Ref**	**Narration**	**Debit**	**Credit**	**Balance**
01/03/2021		Period opening balance			(870.00)
04/03/2021	1596	Customer 10207		80.00	(950.00)
06/03/2021	6472	Customer 10211	8.00		(942.00)
10/03/2021	1597	Customer 10205		37.50	(979.50)

E7-11 Recording general ledger journal entries [10–15 min]

Assume that the Prepaid rent account (18761) of Tropical View had a period opening balance of $1 200, and payments for prepaid rent during the year totalled $1 400. The balance of Rent expense (51134) is zero. Prepaid rent at the end of the period should be $600.

Illustrate how the rent expense for the year would be recorded and posted in a computerised accounting information system, using the format in Exhibit 7-6. Illustrate the account postings to Prepaid rent, using the format in Exhibit 7-7.

Problems

P7-1 Using a spreadsheet to prepare a partial balance sheet and evaluate financial position [10 min]

The spreadsheet outlined below shows the assets on the Pandera Pizzeria balance sheet.

	Column	
Row number	**A**	**B**
3	Assets:	
4	Current assets:	
5	Cash	number
6	Receivables	number
7	Inventory	number
8		
9	Total current assets	
10		
11	Equipment	number
12	Accumulated depreciation	number
13		
14	Equipment, net	
15		
16	Total assets	
17		

Requirement

Give the appropriate formula for each cell that needs a formula. Choose from these symbols:
+ (add)   * (multiply)
– (subtract)   / (divide)
=SUM(beginning cell:ending cell)

P7-2 Recording general ledger and accounts receivable transactions [30–40 min]

The general ledger of Storm Consulting includes the following selected accounts, along with their account numbers:

Cash	111	GST	217
Accounts receivable	112	Service revenue	411
Bills receivable	115	Service discounts	412
Equipment	141	Service returns and allowances	413
Land	142	Interest	420

All credit sales are on Storm's standard terms of 2/10, n/30. Sales and cash receipts transactions in November 2021 were as follows:

Nov 2	Charged Grant Thornton (112010), $800, for professional advice.
6	Received interest on loan, $770.
8	Charged McNair Co. (112017), $2 830, for professional services.
9	Sold land that cost $22 000 for cash of $22 000. There was no GST on this transaction.
11	Charged Nickerson Supply (112019), $1 500, for consulting advice.
11	Received cash from Grant Thornton in full settlement of the account receivable from 2 November.
15	Charged Montez and Montez (112023), $900, for professional services.
18	Issued a credit note to McNair Co., $120, for an incorrect charge.
19	Charged Nickerson Supply (112019), $3 900, for professional services.
21	Received $1 200 cash from McNair Co. in partial settlement of its account receivable. There was no discount.
22	Received cash from Montez and Montez for its account receivable from 15 November.
22	Charged Diamond Co. (112034), $2 000, for professional services.
25	Collected $4 200 on a bill receivable. There was no interest.
27	Charged Littleton Corporation (112028), $600, for professional advice.
28	Issued a credit note to Diamond Co., $680, for an incorrect charge.
30	Received $1 510 cash on account from McNair Co. There was no discount.

Note: Unless otherwise stated, all sales data include GST at a rate of 10%. However, references to the original cost of items sold exclude (are net of) GST.

Requirements

1 For each transaction, identify the type of transaction to be recorded in a computerised accounting information system: general ledger journal entry, credit sale, cash receipt, or credit note.
2 For each transaction, illustrate how it would be recorded and posted in a computerised accounting information system, using the formats provided in Exhibits 7-6, 7-10, 7-11, 7-12 and 7-13.

Note: Problem P7-2 should be completed before Problem P7-3.

P7-3 Posting general ledger and accounts receivable transactions [20–30 min]

Refer to Problem P7-2. Assume that Storm's transactions have been recorded in its computerised accounting information system.

Using the formats in Exhibits 7-7 and 7-14, illustrate how the postings of these transactions would appear in the general ledger and customer accounts. Balance the total of the customer account balances in the accounts receivable ledger against Accounts receivable in the general ledger.

P7-4 Recording accounts payable transactions [20–30 min]

The general ledger of Aussie Car Specialists includes the following accounts, along with their account numbers:

Cash	111	Accounts payable	211
Prepaid insurance	161	GST	217
Supplies	171	Rent expense	562
Equipment	189	Electricity and gas expense	565

Transactions in January 2021 that affected purchases and cash payments were as follows (all purchases include GST at 10% unless otherwise stated):

Jan 2	Recorded a rent account from Harcourts Property (211045), debiting Rent expense for $900. There was no GST on this transaction. Terms were n/30. Paid this account immediately.
5	Purchased supplies on credit from Sylvania Supplies (211034), $5 000. Terms were 2/15, n/45.
6	Purchased supplies on credit terms of 2/10, n/30 from Harmon Sales (211014), $800.
7	Recorded electricity and gas bills from Energex (211033), $400. GST included in this amount was $20. Terms were n/30. Paid this account immediately.
10	Purchased equipment on credit from Lancer Materials (211011), $1 050. Payment terms were 2/10, n/30.
11	Returned the equipment to Lancer Materials. It was defective.
12	Paid Sylvania Supplies the amount owed on the purchase of 5 January.
12	Purchased equipment on credit from Lancer Materials $1 100. Terms were 2/10, n/30.
15	Recorded an insurance account from Budget Direct (211050), debiting Prepaid insurance, $2 410. There was no GST on this transaction. Terms were n/30. Paid this account immediately.
17	Recorded electricity and gas bills from Energex (211033), $165. GST included in this amount was $15. Terms were n/30. Paid this account immediately.
19	Paid account payable to Harmon Sales, from 6 January.
20	Paid account payable to Lancer Materials from 12 January.
21	Purchased supplies on credit from Master Supply (211027), $110. Terms were net 30.
22	Purchased supplies on credit terms of 1/10, n/30 from Lu Brothers (211030), $900.
26	Returned supplies purchased for $500 on 22 January to Lu Brothers.
31	Paid Lu Brothers the net amount owed from 22 January, less the return on 26 January.

Requirements

1 For each transaction, identify the type of transaction to be recorded in a computerised accounting information system: credit purchase, cash payment, or debit note.

2 For each transaction, illustrate how it would be recorded and posted in a computerised accounting information system, using the formats provided in this chapter. Allocate appropriate account numbers as required.

Note: Problem P7-4 should be completed before Problem P7-5.

P7-5 Posting accounts payable transactions [20–30 min]

<div style="float:right">**LO 5**</div>

Refer to Problem P7-4. Assume that Aussie's transactions have been recorded in its computerised accounting information system.

Using the formats in Exhibits 7-7 and 7-21, illustrate how the postings of these transactions would appear in the general ledger and creditor accounts. Balance the total of the creditor account balances in the accounts payable ledger against Accounts payable in the general ledger.

P7-6 Recording and posting transactions [30–40 min]

<div style="float:right">**LO 3, 4, 5**</div>

Prudhoe Bay Accounting charges for professional services on terms of 2/10, n/30. During March, Prudhoe Bay completed these transactions:

Mar 2	Issued invoice no. 191 to L. E. Wooten, $2 350.
3	Purchased supplies on credit terms of 3/10, n/60 from Delwood Plaza, $5 900.
5	Purchased supplies from City Office Supplies for $1 080. Issued cheque no. 473 to pay this account immediately.
8	Collected interest revenue of $120.
9	Issued invoice no. 192 to Canberra Associates, $6 250.
10	Purchased supplies from City Office Supplies for $770. Issued cheque no. 474 to pay this account immediately.
12	Received $2 303 cash from L. E. Wooten in full settlement of her account receivable, net of the discount, from the sale of 2 March.
13	Issued cheque no. 475 to pay Delwood Plaza net amount owed from 3 March.
13	Purchased supplies on credit from Houghton Supplies, $680. Terms were net end-of-month.
15	Charged J. R. Wakeland for professional services, issuing invoice no. 193 for $740.
17	Issued credit memo to J. R. Wakeland for $740 for billing error.

18	Issued invoice no. 194 to L. E. Wooten, $1 825.
19	Received $6 125 from Canberra in full settlement of its account receivable from 9 March.
20	Purchased supplies on credit terms of net 30 from Jasper Sales, $2 150.
22	Purchased furniture on credit terms of 3/10, n/60 from Rickwood, $775.
22	Acquired insurance cover from NRMA for $1 345, debiting Prepaid insurance. Issued cheque no. 476 to pay this account.
25	Received an invoice for electricity and gas from Energex, $380. Issued cheque no. 477 to pay this account.
28	Purchased supplies on credit terms of 2/10, n/30 from Houghton Supplies, $420.
29	Returned damaged supplies to Houghton Supplies, issuing a debit memo for $420.
29	Charged Canberra Associates for professional services, issuing invoice no. 195 for $1 800.
30	Issued cheque no. 478 to pay Houghton Supplies on account from 13 March.
31	Received cash in full from L. E. Wooten on credit sale of 18 March. There was no discount.
31	Monthly salaries were accrued of $2 100.

Requirements

1 Open general ledger accounts using Prudhoe Bay's account numbers that follow.

Cash	111	Service revenue	411
Accounts receivable	112	Service discounts	412
Supplies	116	Service returns and allowances	413
Prepaid insurance	117	Interest revenue	419
Furniture	151	Purchases discounts	425
Accounts payable	211	Salary expense	531
Accrued salaries	213	Electricity and gas expense	541
GST clearing	217		

2 Open these accounts in the subsidiary ledgers: Accounts receivable ledger—Canberra Associates, J. R. Wakeland and L. E. Wooten; Accounts payable ledger—City Office Supplies, Delwood Plaza, Energex, Houghton Supplies, Jasper Sales, NRMA and Rickwood. Allocate appropriate account numbers.
3 Illustrate the recording of the transactions assuming that Prudhoe Bay uses a computerised accounting information system, and all accounts receivable and accounts payable amounts include GST.
4 Illustrate the posting of the transactions to the ledgers.
5 Balance the total of the customer account balances in the accounts receivable ledger against Accounts receivable in the general ledger. Do the same for the accounts payable ledger and Accounts payable in the general ledger.

Continuing exercise

CE-7 Recording and posting transactions [30–45 min]

This problem continues with the garden maintenance business of Lawlor Lawn Service begun in Chapter 1. Refer to the transactions listed in CE-2 in Chapter 2.

Requirements

1 Illustrate the recording and posting of the transactions, assuming that Lawlor Lawn Service uses a computerised accounting information system. Use the format provided in the exhibits in this chapter. Allocate appropriate account numbers.
2 Compare your answers with those you derived in Exercise CE-2. Are they the same or different?

Continuing problem

CP7-1 Recording and posting transactions [30–45 min]

This problem continues with the consulting business of Draper Consulting begun in Chapter 1. Refer to the transactions listed in CP-2 in Chapter 2.

Requirements

1   Illustrate the recording and posting of the transactions, assuming that Draper Consulting uses a computerised accounting information system. Use the format provided in the exhibits in this chapter. Allocate appropriate account numbers.
2   Compare your answers with those you derived in CP-2. Are they the same or different?

APPLY

Decision cases

CASE 7-1

A fire destroyed certain accounting records of Gough Books. The owner, Marilyn Gough, who is not registered for GST, asks for your help in reconstructing the records. She needs to know: (1) the beginning and ending balances of Accounts receivable, (2) the sales on credit, and (3) total cash receipts on account from customers during April. All of the sales are on credit, with credit terms of 2/10, n/30. All cash receipts on account reached the store within the 10-day discount period, except as noted. The only accounting record preserved from the fire is the accounts receivable subsidiary ledger, which follows.

	Gandalf Sales				
Date	Details	Trans ref.	Debit	Credit	Balance
Apr 1	Balance				450
3		2056		450	0
25		3010	3 600		3 600
29		3011	1 100		4 700

	Lee Supplies				
Date	Details	Trans ref.	Debit	Credit	Balance
Apr 1	Balance				2 800
15		3007	2 600		5 400
29		2061		1 500*	3 900

* Cash receipt didn't occur within the discount period.

	Sally Jones				
Date	Details	Trans ref.	Debit	Credit	Balance
Apr 1	Balance				1 100
5		2057		1 100	0
11		3006	400		400
21		2059		400	0
24		3009	2 000		2 000

Jacques LeHavre					
Date	Details	Trans ref.	Debit	Credit	Balance
Apr 1	Balance				0
8		3005	2 400		2 400
16		3008	900		3 300
18		2058		2 400	900
19		1034		200	700
27		2060		700	0

CASE 7-2

MicroData Solutions develops cutting-edge networking software for clients. MicroData's quality control officer estimates that credit notes are required for 20% of the firm's services. MicroData needs a menu option in its computerised accounting information system specifically for posting credit notes.

Requirements

1   Design how a credit note would be recorded and posted using MicroData Solutions' computerised accounting information system. Use the exhibits in this chapter as a guide.
2   Illustrate the recording and posting of one credit note.

MicroData is registered for GST.

Focus on ethics

On a recent trip to Africa, J. Brown, sales manager of Prompt Technology, took his wife along at the firm's expense. Linda White, senior manager of sales and Brown's boss, thought his travel and entertainment expenses seemed excessive. But she approved the reimbursement because she owed Brown a favour. Linda was aware that the firm's CEO reviewed all accounts payable transactions, so she recorded J. Brown's wife's expenses as a general ledger journal entry as follows:

Details	Debit	Credit
Sales promotion expense	9 100	
Cash		9 100

Requirements

1   Does recording the transaction as a general ledger journal entry rather than an accounts payable cash payment affect the amounts of cash and total expenses reported in the financial statements?
2   Why did Linda White record these expenses as a general ledger journal entry?
3   What is the ethical issue in this situation? What role does accounting play in this issue?

Fraud case

Didrikson Rubin, the auditor of Red Barn Farm Equipment, was verifying cash payments to creditors for the past several months. She noticed that several cheques had been paid to a specific creditor, but she couldn't verify the justification for the payments. The creditor did not appear to have a website. Didrikson suspected that an employee was issuing cheques to a fictitious 'creditor' on receipt of fictitious invoices. How might Didrikson investigate the suspected fraud?