

## CHAPTER 3

### The Accounting Information System

#### Study Objectives

- Analyze the effect of business transactions on the basic accounting equation.
- Explain what an account is and how it helps in the recording process.
- Define debits and credits and explain how they are used to record business transactions.
- Identify the basic steps in the recording process.
- Explain what a journal is and how it helps in the recording process.
- Explain what a ledger is and how it helps in the recording process.
- Explain what posting is and how it helps in the recording process.
- Explain the purposes of a trial balance.

## Chapter Outline

### Study Objective 1 - Analyze the Effect of Business Transactions on the Basic Accounting Equation

#### 1. Transactions

- a. **events** that must be recorded in the financial statements.
- b. **events** can be divided into two types:
  - i. **External events** occur between the company and some outside party. If an **external event** involves an **exchange of assets, liabilities, or stockholders' equity between a company and an outside party** it is a **transaction** and must be recorded.
  - ii. **Internal events** are economic events that occur entirely within one company. **Internal events** are considered transactions if the **event results in a financial impact that you can measure with reasonable accuracy**.

2. **Transaction analysis** - the process of considering the transaction or event that has taken place and identifying how the transaction is going to impact the balance sheet equation.

Consider the following Facts:

1. 10/1/x1 Owner invests \$10,000 cash in the business, in exchange for \$10,000 of Sierra Corporation common stock. Both Cash and Common Stock would increase by \$10,000  
Cash 10,000  
Common Stock @ 1\$ par 10,000  
Owner invests cash in business in return for C/S  
Note that common stock is always recorded at the number of shares issued x par value
2. 10/1/x1 Sierra issued a 3-month, 12%, \$5,000 note payable to Castle Bank. This transaction results in an equal increase in assets and liabilities: Cash (an asset) increases \$5,000 and Notes Payable (a liability) increases \$5,000  
Cash 5,000  
Notes Payable 5,000  
Issued a 3-month 12% note payable to Castle Bank
3. 10/2/x1 Sierra acquired office equipment by paying \$5,000 cash to Superior Sales Co. An equal increase and decrease in Sierra's assets occur. Cash would decrease by \$5,000 and Office Equipment would increase by \$5,000.  
Office Equipment 5,000  
Cash 5,000
4. 10/2/x1 On October 2 Sierra received a \$1,200 cash advance from R. Knox, a client, for advertising services that are expected to be completed by December 31. Both Cash and Unearned Service Revenue, a liability, would increase by \$1,200.  
Cash 5,000  
Unearned Service Revenue 5,000
5. 10/3/x1 Sierra received \$10,000 cash from Copa Company for advertising services performed. Sierra received an asset (cash) in exchange for services (revenue). Revenue increases stockholders' equity. Both assets and stockholders' equity would increase. Cash is increased \$10,000 and Service Revenue (which will be

closed to Retained Earnings) is increased \$10,000

Cash	10,000	
Service Revenue		10,000

6. 10/3/x1 Sierra paid its office rent for the month of October in cash, \$900. Both Cash and Stockholders' equity would decrease. Expenses decrease stockholders' equity.

Rent Expense	900	
Cash		900

7. 10/4/x1 Sierra paid \$600 for a one-year insurance policy that will expire next year on September 30. Cash would decrease and another asset Prepaid Insurance would increase.

Prepaid Insurance	600	
Cash		600

8. 10/5/x4 Sierra purchased an estimated 3-month supply of advertising materials on account from Aero Supply for \$2,500. Both Art Supplies and Accounts Payable would increase by \$2,500

Art Supplies	2,500	
Accounts Payable-Aero		2,500

9. 10/8/x1 Sierra hired four new employees. This is not a business transaction e/g. no consideration was given or received and nothing is receivable or owed; therefore no journal entry is required.

10. 10/20/x1 On October 20 Sierra paid a \$500 dividend. Both Cash and Stockholders' Equity would decrease by \$500.

Dividends	500	
Cash		500

Note that Dividends is a component of Retained Earnings which, in turn, is a component of SHE

11. 10/22/x1 Employees have worked 2 weeks, earning \$4,000 in salary, which will be paid on October 26. Both Salary Expense and Accounts Payable will increase until the salary is paid; when the salary is paid, both Accounts Payable and cash will decrease.

Salary Expense	4,000	
Salary Payable		4,000

10/26/x1	Salary payable	4,000	
	Cash		4,000

### Study Objective 2 - Explain What an Account is and How it Helps in the Recording Process

1. **Account** - an individual accounting record of increases and decreases in a specific **asset**, **liability**, or **stockholders' equity** item.
  - a. An **account** consists of three parts: (1) the title of the account, (2) a left or **debit** side, and (3) a right or a **credit** side.
  - b. Because segments of the **account** resemble the letter T, it is often referred to as a **T account**.

### Study Objective 3 - Define Debits and Credits and Explain How They are Used to Record Business

## Transactions

1. The term **debit** means left, and **credit** means right.
  - a. **Debit** is abbreviated **Dr.** and **credit** is abbreviated **Cr.**
  - b. The act of entering an amount of the left side of an account is called **debiting**. Making an entry on the right side is called **crediting**.
  - c. When the totals of the two sides are compared, an account will have a **debit balance** if the left side is greater. Conversely, the account will have a **credit balance** if the right side is greater. In double-entry accounting, for every **debit** there must be an equal **credit**. And, the **accounting equation** must be kept in balance.
  - d. **Debits** increase **assets** and **expenses** while they decrease **liabilities, common stock and revenues**.
  - e. **Credits** decrease **assets** and **expenses**. Conversely, they increase **liabilities, stockholders, and revenues**.

**Note: Remember the outside increase rule (with the exception of Expenses!!! (Which are really short-lived Assets))**

## Study Objective 4 - Identify the Basic Steps in the Recording Process

The basic steps in the accounting process are:

1. Analyze each transaction in terms of its effect on the accounts and record in the General Journal.
  - a. A **source document**, such as a **sales slip**, a **check**, a **bill**, or a **cash register tape** provides evidence of the transaction.
2. Transfer the journal information to the ledger (book of accounts).
3. Due a Trial Balance to insure that the accounts are in balance.
4. Make the Adjusting entries and Closing Entries (Bring the accounts up to date as of the date of the financial statements and reduce the nominal accounts to zero balance for the start of the next period).
5. Do a Post-Closing Trial Balance to insure that the accounts are in balance after the adjusting and closing entries have been made.

## Study Objective 5 - Explain What A Journal is and How it Helps in the Recording Process

1. **Transactions** are entered in the **journal** in chronological order before being transferred to the **accounts**.
2. The **journal** has a place to record the **debit** and **credit** effects on specific **accounts** for each **transaction**.
3. Companies may use various types of journals, but every company has the most basic form of journal, a **general journal**.
4. The **journal** makes significant contributions to the recording process:
  - a. The **journal** discloses in one place the complete effect of a **transaction**.
  - b. The **journal** provides a **chronological record of transactions**.
  - c. The **journal** helps prevent or locate errors because the **debit** and **credit** amounts for each entry can be readily compared.
5. Entering transaction data into the **journal** is known as **journalizing**.

## Study Objective 6 - Explain What a Ledger is and How it Helps in the Recording Process

1. The entire group of **accounts** maintained by a company is referred to as the **ledger**.
2. The **general ledger** contains all of the **asset, liability and stockholders' equity accounts**.

3. Information in the **ledger** provides management with the balances in various **accounts**.
4. **Accounts** in the **general ledger** are listed in the **chart of accounts**.

**Study Objective 7 - Explain What Posting is and How it Helps in the Recording Process**

1. **Posting** is the process of transferring **journal entries** to the **ledger accounts**.
2. **Posting** accumulates the effects of **journal transactions** in the individual **ledger accounts**.

**GENERAL JOURNAL**

<b>Date</b>	<b>Account Titles and Explanation</b>	<b>Debit</b>	<b>Credit</b>
2001			
Oct 1	Cash	10,000	
	Common Stock		10,000
	(Issued shares of stock for cash)		
1	Office Equipment	5,000	
	Cash		5,000
	(Paid cash for office equipment)		
2	Cash	1,200	
	Unearned Fees		1,200
	(Received advance from R. Knox for service to be rendered in future)		
3	Rent Expense	900	
	Cash		900
	(Paid October rent)		
4	Prepaid Insurance	600	
	Cash		600
	(Paid one-year policy; effective date, October 1)		
5	Advertising Supplies	2,500	
	Accounts Payable		2,500
	(Purchased supplies on account from Aero Supply)		
20	Dividends	500	
	Cash		500
	(Declared and paid cash dividend)		
22	Salaries Expense	4,000	
	Salaries Payable		4,000
26	Salaries Payable	4,000	
	Cash		4,000
	(Paid Salaries to date)		

### **Study Objective 8 - Explain the Purposes of a Trial Balance**

1. A **trial balance** is a list of **accounts** and their balances at a given time.
2. The primary purpose of the **trial balance** is to prove the mathematical equality of **debits** and **credits** after **posting**.
3. A **trial balance** uncovers errors in **journalizing** and **posting**.
4. A **trial balance** is useful in the preparation of financial statements.
5. A **trial balance** is limited in that it will balance, and therefore not uncover errors when:
  - a. A **transaction** is not **journalized**,
  - b. A correct **journal entry** is not **posted**,
  - c. A journal entry is posted twice,
  - d. Incorrect accounts are used in **journalizing** and **posting**, or
  - e. Offsetting errors are made in recording the amount of a **transaction**.

### Chapter 3 Review

- ✓ What is the accounting equation? How do business transactions effect the basic accounting equation?
  
- ✓ What is an account and how does it help in the recording process?
  
- ✓ Can you debit and credit and explain how they are used to record business transactions?
  
- ✓ What are the basic steps in the recording process?
  
- ✓ What is a journal? How does it help in the recording process?
  
- ✓ What is a ledger? How does it help in the recording process?
  
- ✓ What is posting and how does it help in the recording process?
  
- ✓ What is the purpose of a trial balance?

**Chapter 3**

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The term \_\_\_\_\_ means left, and \_\_\_\_\_ means right. They are commonly abbreviated as \_\_\_\_\_ for \_\_\_\_\_ and \_\_\_\_\_ for \_\_\_\_\_. These terms do not mean increase or decrease. The terms \_\_\_\_\_ and \_\_\_\_\_ are used repeatedly in the recording process to describe where entries are made in \_\_\_\_\_. For example, the act of entering an amount on the left side of an account is called \_\_\_\_\_ the account, and making an entry on the right side is \_\_\_\_\_ the account. When the totals of the two sides are compared an account will have a \_\_\_\_\_ if the total of the debit amounts exceeds the \_\_\_\_\_. Conversely, an account will have a \_\_\_\_\_ if the credit amounts exceed the \_\_\_\_\_.



## Solutions to Reading Comprehension Check I

### Chapter 3

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The term debit means left, and credit means right. They are commonly abbreviated as dr for debit and cr for credit. These terms do not mean increase or decrease. The terms debit and credit are used repeatedly in the recording process to describe where entries are made in accounts. For example, the act of entering an amount on the left side of an account is called debiting the account, and making an entry on the right side is crediting the account. When the totals of the two sides are compared an account will have a debit balance if the total of the debit amounts exceeds the credits. Conversely, an account will have a credit balance if the credit amounts exceed the debits.

**Chapter 3**

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When revenues are earned, stockholders' equity is \_\_\_\_\_. Accordingly, the effect of debits and credits on the revenue account is identical to their effect on \_\_\_\_\_. Revenue accounts are increased by \_\_\_\_\_ and decreased by \_\_\_\_\_.

On the other hand, expenses \_\_\_\_\_ stockholders' equity. As a result, expenses are recorded by \_\_\_\_\_. Since \_\_\_\_\_ are the negative factor in the computation of net income, and \_\_\_\_\_ are the positive factor, it is logical that the increase and decrease sides of expense accounts should be the reverse of the \_\_\_\_\_. The expense accounts are increased by \_\_\_\_\_ and decreased by \_\_\_\_\_.

## Solutions to Reading Comprehension Check II

### Chapter 3

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When revenues are earned, stockholders' equity is increased. Accordingly, the effect of debits and credits on the revenue account is identical to their effect on stockholders' equity. Revenue accounts are increased by credits and decreased by debits.

On the other hand, expenses decrease stockholders' equity. As a result, expenses are recorded by debits. Since expenses are the negative factor in the computation of net income, and revenues are the positive factor, it is logical that the increase and decrease sides of expense accounts should be the reverse of the revenue accounts. The expense accounts are increased by debits and decreased by credits.

**Chapter 3**

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- \_\_\_\_\_ 1. The entire group of accounts maintained by a company.
- \_\_\_\_\_ 2. A list of accounts and the account numbers which identify their location in the ledger.
- \_\_\_\_\_ 3. The procedure of entering transaction data in the journal.
- \_\_\_\_\_ 4. Events that require recording in the financial statements because they involve an exchange affecting assets, liabilities, or stockholders' equity (an external event) or because a reasonable estimate of value can be determined (an internal event).
- \_\_\_\_\_ 5. The process of entering transaction data in the journal.
- \_\_\_\_\_ 6. An individual accounting record increases and decreases in a specific asset, liability, and stockholders' equity items.
- \_\_\_\_\_ 7. A system that records the dual effect of each transaction in appropriate accounts.
- \_\_\_\_\_ 8. The procedure of transferring journal entries to the ledger accounts.
- \_\_\_\_\_ 9. The left side of an account.
- \_\_\_\_\_ 10. A list of accounts and their balances at a given time.

## Solutions to Vocabulary Quiz

### Chapter 3

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1. Ledger
2. Chart of accounts
3. Journalizing
4. Transactions
5. Journal
6. Account
7. Double-entry system
8. Posting
9. Debit
10. Trial balance

**Chapter 3**

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1. The process of identifying the specific affected accounts and the amount of the change in each account is referred to as:
  - a. posting.
  - b. transaction analysis.
  - c. journalizing.
  - d. balancing.
  
2. A distribution by a corporation to its stockholders on a basis proportional to each investor's percentage ownership is:
  - a. a credit.
  - b. salary expense.
  - c. wages expense.
  - d. a dividend.
  
3. Dividends are recorded on the:
  - a. income statement.
  - b. retained earnings statement.
  - c. cash flows statement.
  - d. both b and c above.
  
4. Items such as a sales slip, a check, a bill, or a cash register tape are examples of:
  - a. balance sheet accounts.
  - b. income statement accounts.
  - c. cost of goods sold.
  - d. source documents.
  
5. The process of entering transaction data into the journal is called:
  - a. posting.
  - b. journalizing.
  - c. balancing.
  - d. none of the above.
  
6. Which of the following is **not** a contribution of the general journal to the recording process:
  - a. The determination of net income.
  - b. It discloses in one place the complete effect of a transaction.
  - c. It provides a chronological record of transactions.
  - d. It helps to prevent or locate errors because the debit and credit amounts for each entry can be readily compared.
  
7. The basic steps in the recording process are:
  - a. Analyze the transaction, enter the transaction in the journal, and transfer the information to the general ledger.
  - b. Enter the transaction in the journal, analyze the transaction, and transfer the information to the general ledger.
  - c. Analyze the transaction, enter the transaction in the financial statements, and enter the transaction in the

- journal.
- d. None of the above.

8. All of the following accounts have debit balances with the **exception of**:
- a. cash
  - b. wages expense.
  - c. unearned advertising fees.
  - d. prepaid insurance.
9. All of the following accounts would have credit balances with the **exception of**:
- a. accounts payable.
  - b. notes payable.
  - c. unearned advertising fees.
  - d. dividends.
10. Which of the following mistakes will a trial balance most likely detect:
- a. A transaction is not journalized.
  - b. A debit balance is recorded as a credit balance.
  - c. a journal entry is posted twice.
  - d. Incorrect amounts are used in journalizing or posting.



## Answers to Multiple Choice

### Chapter 3

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1. b
2. d
3. d
4. d
5. b
6. a
7. a
8. c
9. d
10. b

## Exercise 1 - World Wide Web Accounting Research Activity

### Chapter 3

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In Chapter 3 of your text the authors provide examples of financial statements found in an annual report and discuss other elements of an annual report. To learn more about annual reports go to [www.ibm.com](http://www.ibm.com), click on **Investors**, **Guide to financials**, **Getting Started**, and finally **What's an annual report?**

1. Other than the financial statements, what other information can be found in annual reports?
  
  
  
  
  
  
  
  
  
  
2. In addition to annual reports, what other filings are required by the Securities and Exchange Commission?

**Solutions:** Information available on website.

**Note:** The website is constantly being updated. Please check to see that the information requested in this exercise is available.

## Exercise 2 - World Wide Web and Accounting History Research Activity

### Chapter 3

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Luca Pacioli, "the Father of Accounting" was a Franciscan Monk and a contemporary of Leonardo da Vinci. Research the history of accounting in your school library on the internet. Use the information you find to answer the following questions.

1. How old is Accounting?
2. Who was Marion the Sumerian and what was his contribution to accounting?
3. Who was Amatino Manucci?
4. What is the name of the book Pacioli wrote?
5. Who was the first Auditor?
6. Who was William Cooper and how did he contribute to the accounting profession?

**Solutions: Information available on website.**

**Note:** The website is constantly being updated. Please check to see that the information requested in this exercise is available.

### **Exercise 3 - Mechanics of Accounting Activity**

#### **Chapter 3**

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Refer to the loan application prepared for your business in Campus Town USA in Exercises 3 of Chapters 1 and 2. Provide source documents, journal entries, general ledger, and trial balance to support the financial statements prepared earlier.

## Exercise 4 - World Wide Web and Ethics Activity

### Chapter 3

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Fidelity Investments, featured in the opening vignette, was founded in 1946. Go to Fidelity's home page at [www.fidelity.com](http://www.fidelity.com), and search for Fidelity's Code of Ethics to find the answer to the following question.

Fund managers at Fidelity have the potential ability to manipulate stock prices and obtain personal wealth through fund trading. How does Fidelity's code of ethics guard against this practice? Be specific.

**Solutions:** Information available on website.

**Note:** The website is constantly being updated. Please check to see that the information requested in this exercise is available.

## Exercise 5 - Financial Statement Analysis Activity

### Chapter 3

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An "Investor Perspective" in Chapter 3 of your text shows the major revenue and expense accounts of the Chicago Cubs baseball team.

1. Considering the huge increase in professional baseball players' salaries in the last decade, what do you think has happened to total expenses and net income of professional baseball teams?
2. If net income has not decreased, what has been done to offset the higher salaries?
3. Do you think an increase in the selling price of tickets is appropriate considering the fact that baseball is considered "America's national pastime?"
4. You can meet some of the African-American baseball stars who played their greatest years on Negro League teams at [www.blackbaseball.com](http://www.blackbaseball.com). What do you think these players, who helped develop baseball the exciting, skilled game that attracts worldwide attention, would think of today's ticket prices?

#### Solutions:

1. **The increase in professional baseball players' salaries has undoubtedly increased total expenses significantly. Considering the prices paid for professional teams, one cannot imagine that net income has decreased. Net income has probably increased or stayed constant.**
2. **If net income has not decreased, ticket prices have probably increased.**
3. **Baseball has long been considered the "family game." In recent years ticket prices have increased to the point that the cost prohibits many people from attending the games.**
4. **The players who helped develop baseball would probably be critical of today's ticket prices. However, if they were playing today, their attitude concerning salaries and the subsequent price of tickets would probably be different.**

## Exercise 6 - Financial Statement Analysis and Mechanics of Accounting Activity

### Chapter 3

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Forrest Green opened Green Landscaping Service after graduating from the local university. Forrest deposited money his grandfather had given him as a graduation gift in the name of the business. Immediately after making the deposit, Forrest's friend, an accounting major, told him the Balance Sheet for Green Landscaping would look as follows:

Green Landscaping Service  
Balance Sheet  
June 1, 200X

#### Assets

Cash	<u>\$10,000</u>
Total assets	<u>\$10,000</u>

#### Liabilities and Owner's Equity

Owner's Equity	
Forrest Green, Capital	<u>\$10,000</u>
Total liabilities and owner's equity	<u>\$10,000</u>

After a month of operations, Forrest's friend again helped him with a balance sheet. The balance sheet for Green Landscaping Service on June 30, 200X is as follows:

Green Landscaping Service  
Balance Sheet  
June 30, 200X

#### Assets

Cash	\$ 5,000
Accounts receivable	2,200
Supplies	1,800
Equipment	2,800
Truck	<u>12,500</u>
Total assets	<u>\$24,300</u>

#### Liabilities and Owner's Equity

Liabilities	
Accounts payable	2,500
Note payable	<u>10,000</u>
Total liabilities	<u>\$12,500</u>
Owner's Equity	
Forrest Green, Capital	<u>\$11,800</u>

Total liabilities and owner's equity	<u>\$24,300</u>
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## Exercise 6 - Financial Statement Analysis and Mechanics of Accounting (Continued)

### Chapter 3

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Forrest's grandfather is coming for a visit soon. Wanting to be prepared for his visit, Forrest has asked the accounting friend for an explanation of the difference between the two balance sheets. The only thing Forrest can recall is that he has had cash sales totaling \$3,200. Help Forrest and his friend by providing an explanation of the numerical differences and the events that have taken place between the balance sheet dates.

#### Solution:

1. Paid \$2,500 down and borrowed \$10,000 from the bank for a truck costing \$12,500.
2. Purchased Supplies in the amount of \$1,800 and Equipment in the amount of \$2,800, paying \$2,100 in cash and charging the remainder to suppliers.
3. Credit sales amounted to \$2,200.
4. Cash sales totaled \$3,200.
5. Expenses paid for in cash \$3,600.

(This activity is intended for group assignment.)

## Exercise 7 - Financial Statement Analysis Activity

### Chapter 3

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Frank Lorenzi, Chairman of the Board and Chief Executive Officer, in his Letter to the Shareholders of Texas Air, said:

"The events of the past year and a half provide continuing evidence that the fundamental structure of our business is being dramatically reshaped. . . . Most importantly, these efforts have laid the groundwork that allows us to pursue a basic corporate objective--building tangible value for our shareholders."

However, looking at the 1988 financial statements in the annual report, one will see that Texas Air actually lost \$718,638,000 in that year.

1. Find recent annual reports of publicly traded companies in your school library or on the Internet. Study the four financial statements you have learned to prepare in this chapter.
2. Turn your attention to the narrative section of the annual report (i.e. the Presidents Letter or the Letter to the Shareholders).
3. Compare and contrast the information in the financial statements to the information in the narrative section.

## Exercise 8 - World Wide Web Accounting Careers Activity

### Chapter 3

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Your accounting professor frequently mentions individuals in your community who are *CMAs*. Although you hesitate to ask the professor what a *CMA* is, you are curious. To learn more about the *CMA* certification, go to [web.imanet.org](http://web.imanet.org).

Using information gleaned from the Web, answer the following questions.

1. The acronym *CMA* is formed from the initials of what professional accounting certification?
2. What is a *CMA*?
3. What are the objectives of the *CMA* Program?
4. What are the requirements for attaining and holding the *CMA* certification?
5. What subject areas are covered on the *CMA* Exam?
6. What four areas are covered in the Standards of ethical Conduct for Management Accountants?

**Solutions:** Information available on website.

**Note: The website is constantly being updated. Please check to see that the information requested in this exercise is available.**

