

## CHAPTER 2

### OVERVIEW OF BUSINESS PROCESSES

#### SUGGESTED ANSWERS TO DISCUSSION QUESTIONS

**2.1** Three different types of information exist in Table 2.1:

1. Internally-generated financial data
2. Internally-generated operating data
3. Externally-generated data.

Internally generated financial data would be captured directly on source documents that are processed by the AIS and would be reported in traditional financial statements.

Internally generated operating data can be captured in two ways. Some of this data (e.g., time worked) would be captured on source documents. Other data (e.g., employee skills) would traditionally be captured and stored by an information system that is not part of the AIS itself. The AIS, however, should be redesigned so as to integrate this data with the other transaction-oriented data.

Some of the data (e.g., information on market share and customer satisfaction) must come from external sources. The AIS should be designed to store this data in an integrated manner with internally generated data.

**2.2** The fact that all documents are prenumbered provides a means for accounting for their use and for detecting unrecorded transactions. Thus, a missing check indicates a meal for which a customer did not pay. Since each server has his or her own set of checks, it is also easy to identify which server was responsible for that customer. This policy may help to deter theft (e.g., serving friends and not requiring them to pay for the meal, or pocketing the customer's payment and destroying the check) because a reconciliation of all checks will reveal that one or more are missing.

**2.3** An organization's AIS must reflect its line of business. For example:

- Manufacturing companies will need a set of procedures and documents for the production cycle; non-manufacturing companies do not.
- Government agencies need procedures to separately track all inflows and outflows from various funds, to ensure that legal requirements about the use of specific funds are followed.
- Financial institutions do not need extensive inventory control systems.
- Passenger service companies (e.g., airlines, bus, and trains) generally receive payments in advance of providing services. Therefore, extensive billing and accounts

receivable procedures are not needed; instead, they must develop procedures to account for prepaid revenue.

- Construction firms typically receive payments at regular intervals, based on the percentage of work completed. Thus, their revenue cycles must be designed to carefully track all work performed and the amount of work remaining to be done.
- Service companies (e.g., public accounting and law firms) do not sell physical goods and, therefore, do not need inventory control systems. They must develop and maintain detailed records of the work performed for each customer to provide backup for the amounts billed.
- Tracking individual employee time is especially important for these firms because labor is the major cost component.

- 2.4** The objective of this policy is to provide greater control over cash receipts. The number of tickets collected by the ticket taker can be compared to the amount of cash turned in by the cashier. This prevents the cashier from giving free tickets to friends. It also prevents theft of cash by the cashier.
- 2.5** There are no advantages to accountants focusing only on financial information. Both the accountant and the organization would suffer if this occurred. Moreover, it would be very costly to have two systems rather than one that captures and processes operational facts at the same time as it captures and reports financial facts.

The main disadvantage of this is that accountants would ignore much relevant information about the organization's activities. To the extent that such nonfinancial information (e.g., market share, customer satisfaction, measures of quality, etc.) is important to management, the value of the accounting function would decline. Moreover, accountants have been trained in how to design systems to maximize the reliability of the information produced. If relevant information is not produced by the AIS, there is danger that the information may be unreliable because the people responsible for its production have not been trained in, or adequately aware of, the potential threats to reliability and the best measures for dealing with those threats.

## **SUGGESTED ANSWERS TO THE PROBLEMS**

**2.1** Some of the changes in the chart of accounts for each type of entity include the following:

a. University

- No equity or summary drawing accounts. Instead, have a fund balances section for each type of fund.
- Several types of funds, with a separate chart of accounts for each. The current fund is used for operating expenses, but not capital expenditures. Loan funds are used to account for scholarships and loans. Endowment funds are used to account for resources obtained from specific donors, generally with the objective that principal be preserved and that income be used for a specific purpose. Plant funds are used for major capital expenditures. Most fund categories would be further divided into restricted and unrestricted categories.
- Unlikely to have Notes Receivable, but may have Accounts Receivable for students who pay tuition in installment payments.
- Tuition and fees would be one source of revenue. Others include gifts, investment income, sales of services, and, for public universities, state appropriations.
- Student loans are an asset; student deposits are a liability.

b. Bank

- Loans to customers would be an asset, some current others noncurrent, depending upon the length of the loan.
- No inventory
- Customer accounts would be liabilities.
- Classification of revenue would be among loans, investments, service charges, etc.
- No cost of goods sold.

c. Government Unit

- No equity or summary drawing accounts. Instead, have fund balances.
- Balance sheet shows two major categories: (1) assets and (2) liabilities and fund equity.
- Separate chart of accounts for each fund (general fund, special revenue fund, capital projects fund, and debt service fund).
- Revenue and expenditure accounts would be grouped by purpose (e.g., police, highways, sanitation, education, etc.).

- Encumbrance accounts
- Revenues would include taxes, licenses and permits, fines, and charges for specific services.
- Taxes receivable as a separate category due to importance.
- No cost of goods sold.

- d. Manufacturing Company
  - Several types of inventory accounts (raw materials, work-in-process, and finished goods).
  - Additional digits to code revenues and expenses by products and to code assets/liabilities by divisions.
- e. Expansion of S&S
  - Additional digits to code:
    - Revenues and expenses by products and by stores
    - Assets/liabilities by stores.

**2.2** Adapted from the December 1973 CMA Exam (Part 5, Question 2)

A six-digit code (represented by the letters ABCDEF) should be sufficient to meet Dilley & Company's needs:

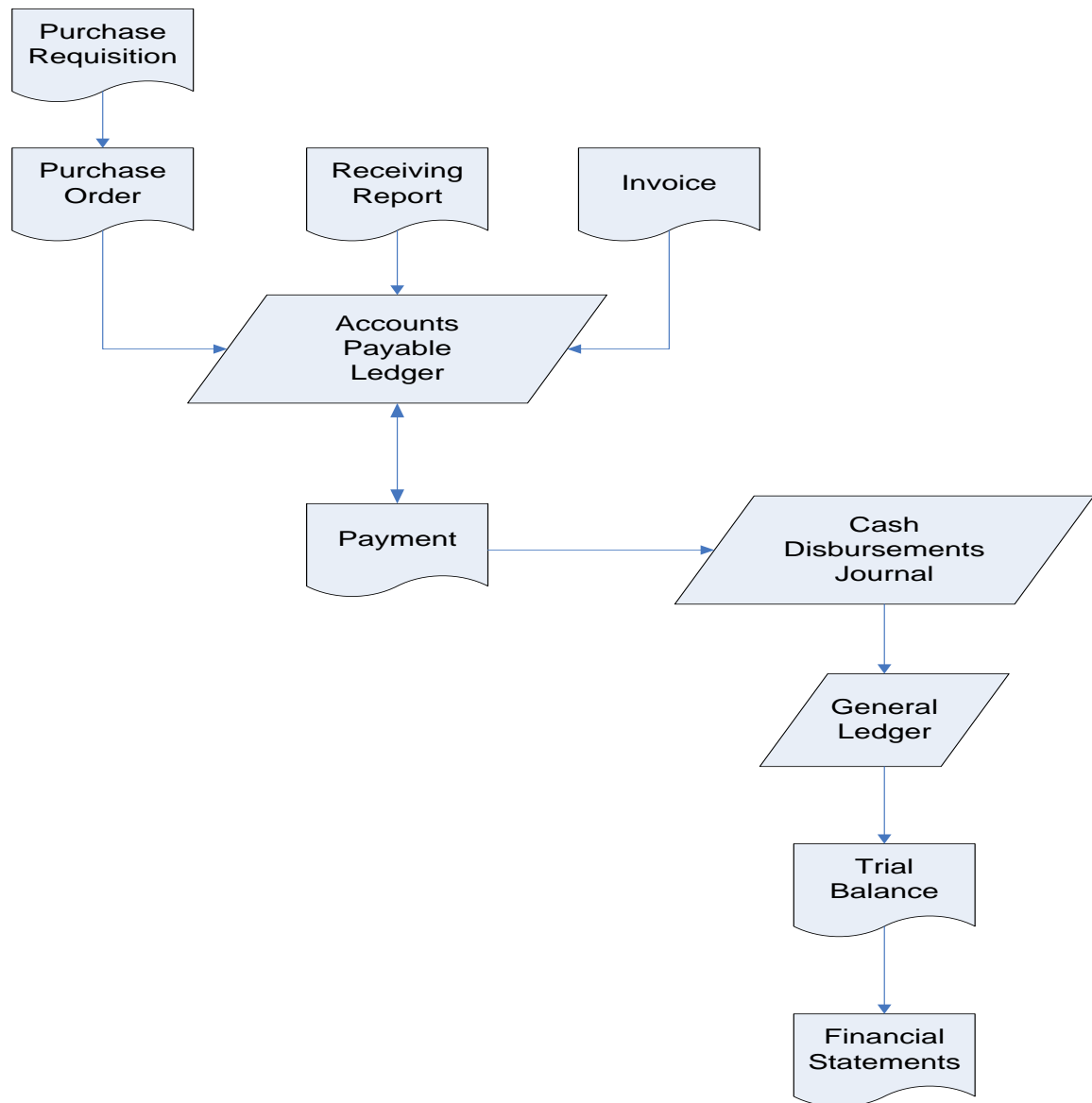
- A This digit would identify the division (there are only 4 presently) plus the corporate office
- B This digit would represent the major account type (asset, liability, equity, revenue, and expense).
- C This digit would represent the major classification within account type:
  - For balance sheet accounts, this would represent specific sub-categories (current assets, plant and equipment, etc.), as only six categories are needed.
  - For expense and revenue accounts, this digit would represent the product group, as again there are only five products plus general costs.
- D This digit would represent specific accounts or cost centers:
  - For balance sheet accounts, this would be the control account; one digit is adequate because the problem says no more than 10 categories.
  - For expense accounts, this would be the cost center; one digit is adequate because the problem indicates no more than 6 cost centers.
- EF These two digits would represent the subsidiary accounts and natural expense categories:

- For expense accounts, these would represent the 56 natural expense categories and variances for each cost center.
- For the balance sheet, these two digits could accommodate up to 100 subsidiary accounts.

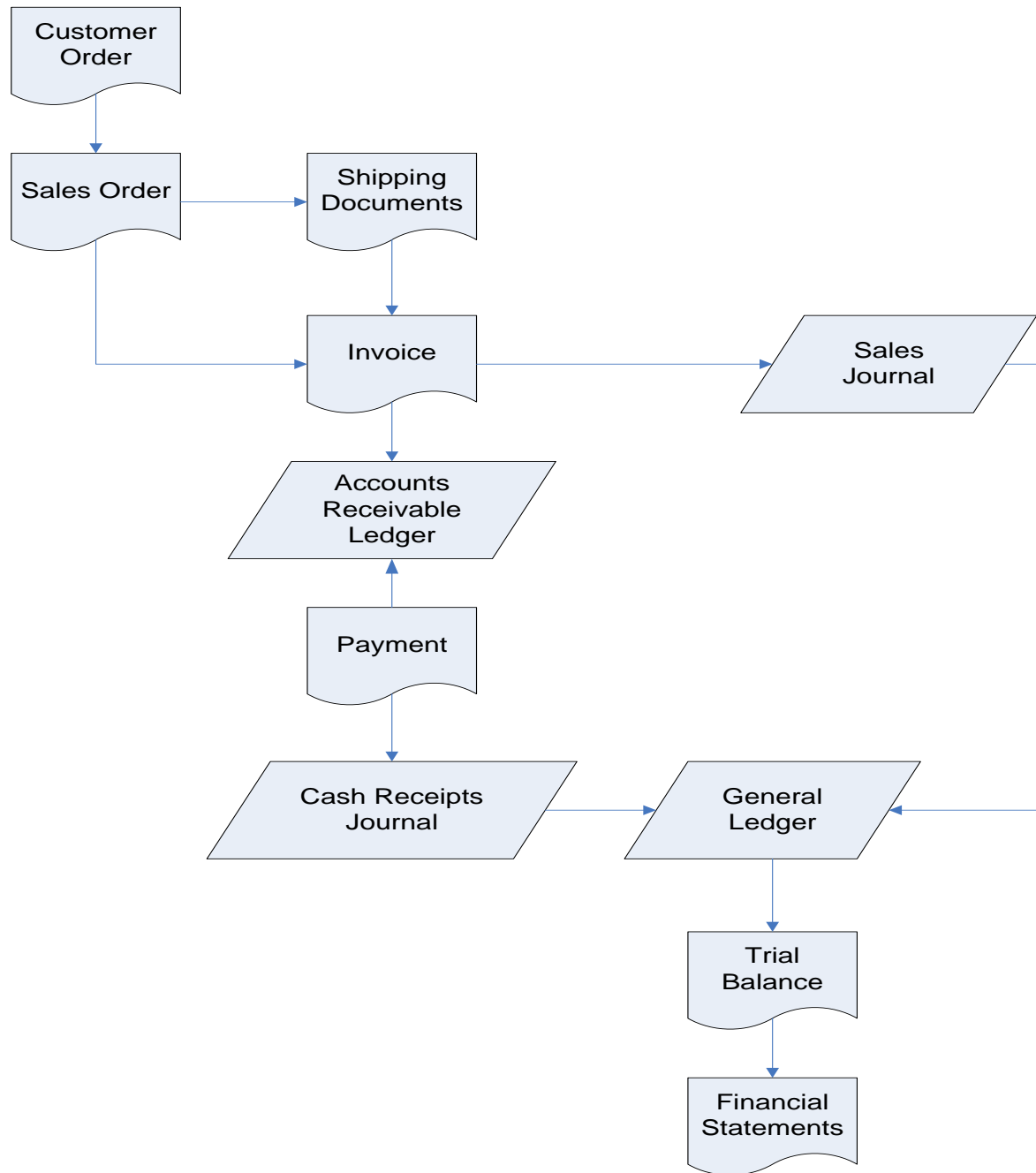
## 2.3

- a. The audit trail for the purchases of inventory would include linking purchase requisitions, purchase orders, and receiving reports to vendor invoices for payment. All these documents would also be linked to the check or EFT transaction used to pay for that invoice and recorded in the Cash Disbursements Journal. In addition, these documents would all be linked to the journal entry made to record that purchase. There would be a general ledger account number at the bottom of each column in the journal. The journal reference would appear in the General Ledger, Inventory Ledger, and Accounts Payable ledger.

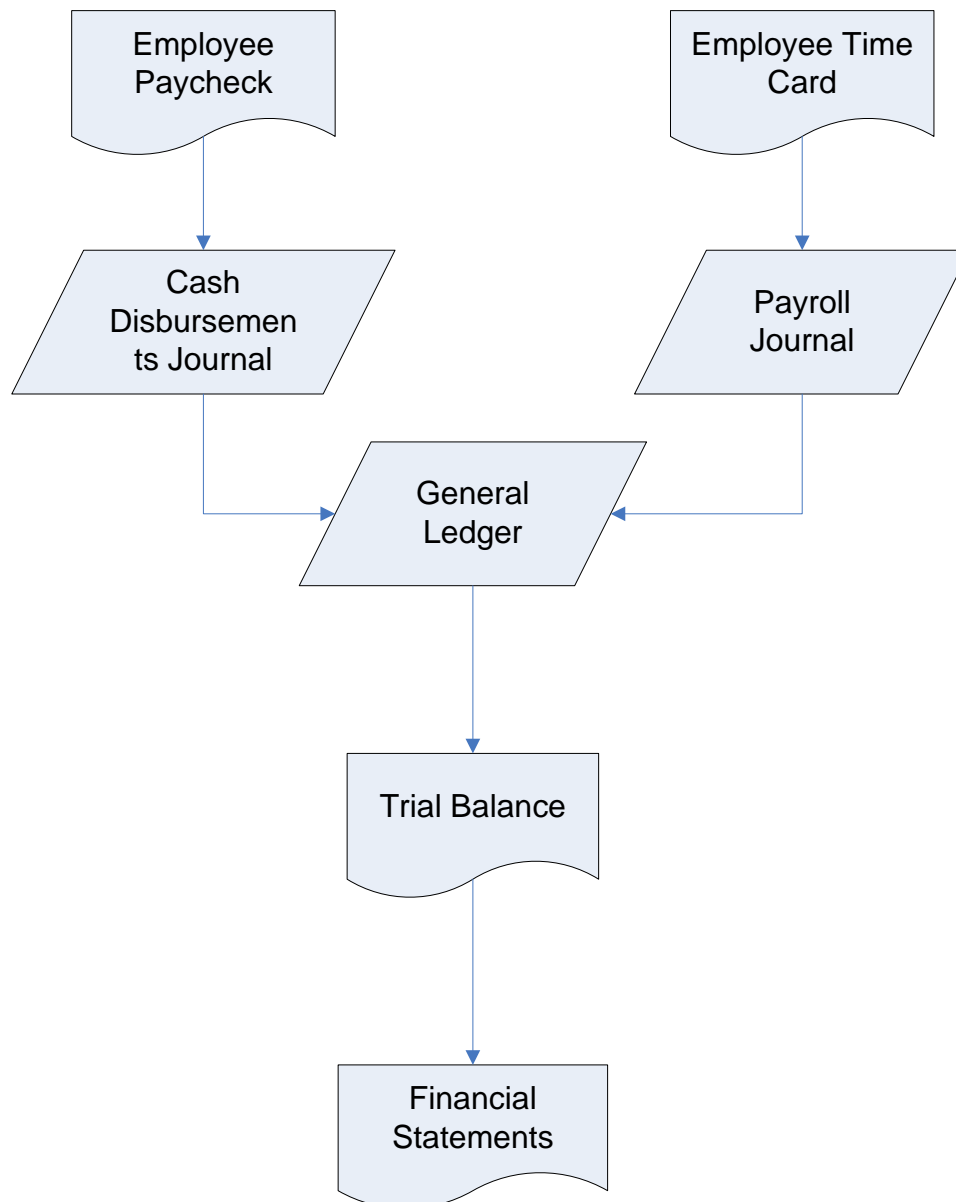




- b. The audit trail for the sale of inventory would link the customer order, sales order, and shipping document to the sales invoice. These documents would also be linked to the journal entry recording the sale of that merchandise. The invoice would also be linked to the cash received from the customer and to the journal entry to record that receipt.



- c. The audit trail for employee payroll would include linking records of employee activity (time cards, time sheets, etc.) to paychecks and to the journal entry to record payment of payroll. In a manufacturing company, there would also be links to the job-time tickets used to allocate labor costs to specific products or processes.



**2.4** Grading depends upon the instructor's judgment about the quality of the coding scheme. The coding scheme should be either a group or block coding. In addition, the student's solutions should provide sufficient detail in order to determine whether the solution represents a group or block coding scheme.

**2.5** Grading depends upon the instructor's judgment about the quality of the report. Points to look for include:

- whether the dysfunctional behavior problem was clearly described
- An analysis of how the behavior resulted from the design of the reporting and performance evaluation system.

**2.6** The company's AIS needed to provide a cash flow budget that clearly projected both inflows and outflows of cash. Such a report would have indicated the likely effects of the new loan and provided advance warning about cash flow problems.

Regular aging of accounts receivable reports would have helped the company to more quickly notice the problem in late and uncollectible receivables. Steps could then be taken to cut off future sales to bad credit risks and to initiate additional efforts to collect from past due accounts.

A flexible budget, with variances, would provide information about costs that might enable corrective action to be taken before profits deteriorate too much.

**2.7** Classify each of the following items as belonging in the revenue, expenditure, human resources/payroll, production, or financing cycle.

- a. Purchase raw materials – Expenditure cycle
- b. Payoff mortgage on factory – Financing cycle
- c. Hire a new assistant controller – Human resources/payroll cycle
- d. Establish a \$10,000 credit limit for XYZ company – Revenue cycle
- e. Pay for raw materials – Expenditure cycle
- f. Disburse payroll checks to factory workers – Human resources/payroll cycle
- g. Record goods received from vendor – Expenditure cycle
- h. Update the allowance for uncollectible accounts – Revenue cycle
- i. Decide how many units to make next month – Production cycle
- j. Complete picking ticket for goods ordered by customer – Revenue cycle
- k. Record factory employee timecards – Human resources/payroll cycle
- l. Sell concert tickets – Revenue cycle
- m. Draw on line-of-credit – Financing cycle
- n. Send new employees to a business ethics course - Human resources/payroll cycle
- o. Pay utility bills – Expenditure cycle
- p. Pay property taxes on office building – Expenditure cycle
- q. Pay federal payroll taxes - Human resources/payroll cycle
- r. Sell DVD player – Revenue cycle

## Ch. 2: Overview of Business Processes

- s. Collect payment on customer accounts – Revenue cycle
- t. Obtain a bank loan – Financing cycle
- u. Pay sales commissions - Human resources/payroll cycle
- v. Send an order to a vendor – Expenditure cycle
- w. Put purchased goods into the warehouse – Expenditure cycle

### 2.8 Identify whether the following transactions belong in a master file or a transaction file.

- a. Update customer address change – Master file
- b. Update unit pricing information – Master file
- c. Record daily sales – Transaction file
- d. Record payroll checks – Transaction file
- e. Change employee pay rates – Master file
- f. Record production run variances – Transaction file
- g. Record Sales Commissions – Transaction file
- h. Change employee office location – Master file
- i. Update accounts payable balance – Master file
- j. Update the accounts receivable balance – Master file
- k. Change vendor payment discount terms – Master file
- l. Record purchases – Transaction file

**2.9** No single answer exists with this case. Indeed, solutions will vary depending upon student ingenuity and creativity. Student answers can be compared to examples of these documents found in chapters 10 and 11.

1. A sample invoice is presented in Chapter 10 (Fig. 10.12). A sample purchase order is presented in Chapter 11 (Figure 11.5). A sample receiving report also appears in Chapter 11 (Fig. 11.7). Although student designs will vary, each document should contain the following data items:

Sales Invoice

Customer name and address	Product code or number
Customer account number	Product description
Customer order number	Quantity ordered
Salesperson code	Quantity shipped
Shipping Address	Unit price
Shipper and date shipped	Extended price
Terms of sale	Taxes, if applicable
Total Amount due	

Purchase Order

Ship to address	Item numbers ordered
Bill to address	Payment terms
Purchasing agent number	Shipping instructions
Quantity of parts ordered	Supplier name or number
Prices of parts ordered	Date of purchase
Taxes, if any	Total amount of purchase

Receiving Report

Vendor name	Vendor number
Vendor address	Date received
Shipper	Receiving clerk number
Quantity received	Part number received
Description/quality remarks	Purchase order number
Inspected by	

Employee Time Card

Employee name	Total regular hours
Employee number	Time in/ Time out
Pay period	Total overtime hours
Department number	Approved by
Employee signature	

2. The report to manage inventory should contain the following information:

- Preferred vendor
- Product number
- Description
- Reorder point
- Quantity on Hand
- Quantity Available
- Vendor performance history
- Quantity on order
- Lead time

3. The report to manage credit sales and cash collections should include:

- Credit sales per period
- Cash collections per period
- Aging of accounts receivable
- Customers by geographic region
- Uncollectible accounts per period

4. The answers to this will vary depending upon the types of documents carried in the office supplies stores visited by the students.

A fruitful topic for class discussion, or a possible additional case assignment, would be to compare the design of paper documents to the data entry screen layouts used in various popular accounting packages (Peachtree, Great Plains, SAP, JD Edwards, etc.).

## 2.10

Student solutions will vary depending on the demonstrations they observe. However, the demonstrations should give the students a more concrete and visual understanding of what an ERP system is and does. Student solutions should at least discuss how an ERP can integrate all of the various cycle activities of a business into one integrated system.

## 2.11

- a. online-real time
- b. online-real time
- c. batch
- d. online-real time
- e. batch



- f. batch
- g. batch
- f. on-line real time

## SUGGESTED ANSWERS TO THE CASES

**2.1** Answers will depend on the students' experience and the nature of the company selected. Be sure that the students thoroughly address all issues raised in the case.

### 2.2 Bar Harbor Blueberry Farm

#### Data from Case

Date	Supplier Invoice	Supplier Name	Supplier Address	Amount
March 7	AJ34	Bud's Soil Prep, Inc.	PO Box 34	\$2,067.85
March 11	14568	Osto Farmers Supply	45 Main	\$ 67.50
March 14	893V	Whalers Fertilizer, Inc.	Route 34	\$5,000.00
March 21	14699	Osto Farmers Supply	45 Main	\$3,450.37
March 21	10102	IFM Package Wholesale	587 Longview	\$4,005.00
March 24	10145	IFM Package Wholesale	587 Longview	\$ 267.88

#### Purchases Journal

Page 1

Date	Supplier	Supplier Invoice	Account Number	Post Ref	Amount
March 7	Bud's Soil Prep, Inc.	AJ34	23	√	\$2,067.85
March 11	Osto Farmers Supply	14568	24	√	\$ 67.50
March 14	Whalers Fertilizer, Inc.	893V	36	√	\$5,000.00
March 21	Osto Farmers Supply	14699	24	√	\$3,450.37
March 21	IFM Package Wholesale	10102	38	√	\$4,005.00
March 24	IFM Package Wholesale	10145	38	√	\$ 267.88
March 31	TOTAL				14,858.60

#### General Ledger

**Accounts Payable**  
**300**

**Account Number:**

Date	Description	Post Ref	Debit	Credit	Balance
March 1	Balance Forward				\$18,735.55
March 31		√		14,858.60	33,594.15

**Purchases****Account Number: 605**

Date	Description	Post Ref	Debit	Credit	Balance
March 1	Balance Forward				\$54,688.49
March 31		√	14,858.60		69,547.09

**Account Payable Subsidiary Ledger**

<b>Account No: 23    Bud's Soil Prep, Inc.    PO Box 34    Terms: 2/10, Net 30</b>				
Date	Description	Debit	Credit	Balance
March 1	Balance Forward			0.00
March 7	Mulch		2,067.85	2,067.85

<b>Account No: 24    Osto Farmers Supply    45 Main    Terms: 2/10, Net 30</b>				
Date	Description	Debit	Credit	Balance
March 1	Balance Forward			0.00
Mar 11	Seedling Heat Mat		67.50	67.50
Mar 21	Medium Portable Greenhouse		3,450.37	3,517.87

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<b>Account No: 36    Whalers Fertilizer,    Route 34    Terms: 2/10, Net 30</b>				
Date	Description	Debit	Credit	Balance
March 1	Balance Forward			0.00
March 14	Premium Leaf-Blend Fertilizer		5,000.00	5,000.00

<b>Account No: 38    IFM Package    587 Longview    Terms: 2/10, Net 30</b>				
Date	Description	Debit	Credit	Balance
March 1	Balance Forward			0.00
Mar 21	Peat Pots		4,005.00	4,005.00
Mar 24	Labels		267.88	4,272.88