

Accounting Information Systems: The Crossroads of Accounting and IT (Kay/Ovlia)
Chapter 2 Accounting Databases

Objective 1

1) Entering data once eliminates the possibility of updating some, but not all of the other entries.

Answer: TRUE

Diff: 1

Objective: Q2.1 What role does the database play in an accounting system?

2) According to the Pareto Principle, if you spend 80% of the time designing a database, you will spend 20% of your time maintaining the database.

Answer: TRUE

Diff: 1

Objective: Q2.1 What role does the database play in an accounting system?

3) Database management system (DBMS) software transfers data from the accounting software to the database.

Answer: TRUE

Diff: 1

Objective: Q2.1 What role does the database play in an accounting system?

4) A database engine is another name for a database program.

Answer: TRUE

Diff: 1

Objective: Q2.1 What role does the database play in an accounting system?

5) _____ provides an interface for the user to enter data in onscreen forms and view reports.

Answer: Accounting software

Diff: 2

Objective: Q2.1 What role does the database play in an accounting system?

6) The DBMS software drives the database _____.

Answer: engine

Diff: 3

Objective: Q2.1 What role does the database play in an accounting system?

7) The _____ inserts, updates, and deletes data in the database.

Answer: DBMS

Diff: 2

Objective: Q2.1 What role does the database play in an accounting system?

8) Nancy Smith comes in to EspressoCoffee to provide her new address and you make the appropriate updates. When preparing a sales receipt for her a week later you notice Nancy's old address appears on receipt. What does this indicate about the database?

- A) The address information was updated for the wrong Nancy Smith.
- B) The same customer was entered into the database multiple times.
- C) The database is working correctly.
- D) Nancy Smith's order was entered incorrectly.

Answer: B

Diff: 2

Objective: Q2.1 What role does the database play in an accounting system?

9) While auditing the Accounts Payable records, the auditor discovers an entry for Coffee Emporium with an address of 809 Main St., St. Louis MO and another entry for Coffee Emporium with an address of 809 Main Street, St. Louis MO. Each entry has a different vendor number. Which of the following statements is false?

- A) The database views these as two separate accounts.
- B) Data was entered into the database incorrectly.
- C) The data needs scrubbing.
- D) The onscreen form for entering vendor information correctly performed data validation.

Answer: D

Diff: 2

Objective: Q2.1 What role does the database play in an accounting system?

10) Acme Shoes rushed development of their new accounting system. They spent 20% of the time in the design phase. How much time will Acme spend maintaining the new accounting system?

- A) 40%
- B) 75%
- C) 80%
- D) 90%

Answer: C

Diff: 1

Objective: Q2.1 What role does the database play in an accounting system?

11) Database Management Systems does all the following except?

- A) transfer data from the accounting software to the database
- B) delete data from the database
- C) provide an interface for entering data
- D) run queries

Answer: C

Diff: 1

Objective: Q2.1 What role does the database play in an accounting system?

12) Which tier in the accounting system architecture that consists of onscreen forms?

- A) User tier
- B) Application tier
- C) Database tier
- D) Accounting tier

Answer: A

Diff: 1

Objective: Q2.1 What role does the database play in an accounting system?

13) When using an accounting database system, such as QuickBooks, what happens when an existing customer name is entered on an onscreen invoice form?

- A) The DBMS prompts you to enter the address and contact information.
- B) The DBMS retrieves inventory information and inserts it into the invoice.
- C) The DBMS retrieves address and contact information and inserts it into the invoice.
- D) The DBMS retrieves tax information and inserts it into the invoice.

Answer: C

Diff: 3

Objective: Q2.1 What role does the database play in an accounting system?

14) What does the DBMS software do?

Answer: The DBMS software does the following.

- 1. creates database tables
- 2. transfers data from the accounting software to the database
- 3. updates data in the database
- 4. deletes data from the database
- 5. sorts database tables
- 6. runs queries

Diff: 2

Objective: Q2.1 What role does the database play in an accounting system?

15) Describe the architecture of an accounting system. In which tier does each element reside?

Answer: The accounting system architecture consists of the accounting interface, accounting software, and the database management system and the operational database.

The accounting interface resides in the user interface tier. This includes onscreen forms (database forms) and reports.

The accounting software resides in the accounting tier. This includes the accounting software.

The DBMS and the operational database resides in the database tier.

Diff: 3

Objective: Q2.1 What role does the database play in an accounting system?

16) You are an intern in a large company. The company would like to improve the communications between the accountants and IT. Because of your background in AIS, you are asked to train the accountants. Your assignment is to describe to your colleagues how data flows through the accounting system architecture when a new customer is entered in the accounting software.

Answer: The answer should include the following information.

The customer address and contact information is entered into the system using the onscreen forms (user interface tier).

This data is passed to the accounting software (application tier).

The accounting software passes the data to the DBMS software.

The DBMS inserts the data into the appropriate table in the database. (The DBMS and database are part of the database tier).

Comment: Modified CPA exam question

Diff: 2

Objective: Q2.1 What role does the database play in an accounting system?

17) You are an intern in a large company. The company would like to improve the communications between the accountants and IT. Because of your background in AIS, you are asked to train the accountants. Your assignment is to describe how data flows through the accounting system architecture when a report is run against the database. Start with requesting the report.

Answer: The answer should include the following information.

The report type is entered into or selected from an onscreen form/accounting interface (user interface tier).

The report type is passed to the accounting software (application tier).

The accounting software passes the data to the DBMS software.

The DBMS software retrieves the appropriate data from the various database tables in the database (the DBMS and database are part of the database tier).

The DBMS passes the data to the accounting software.

The accounting software passes the data accounting interface.

The accounting interface presents the data in the appropriate report format.

Comment: Modified CPA exam question

Diff: 3

Objective: Q2.1 What role does the database play in an accounting system?

Objective 2

1) Data stored in a data warehouse is used for routine business activities.

Answer: FALSE

Diff: 2

Objective: Q2.2 What is the role of the database in the enterprise?

2) The _____ is responsible for managing the enterprise's databases.

Answer: database administrator (DBA)

Diff: 1

Objective: Q2.2 What is the role of the database in the enterprise?

3) Data stored in a _____ may be current data, historical data, or future estimates.

Answer: data warehouse

Diff: 2

Objective: Q2.2 What is the role of the database in the enterprise?

4) _____ databases are databases containing data collected by other organizations.

Answer: External

Diff: 1

Objective: Q2.2 What is the role of the database in the enterprise?

5) To retrieve data from a network database you need to know the _____ of the data.

Answer: record address

Diff: 2

Objective: Q2.2 What is the role of the database in the enterprise?

Match the database type to the corresponding structure.

A) Multiple Tables

B) Multiple Parents and Multiple Children

C) One Parent and Multiple Children

6) Hierarchical Database

Diff: 2

Objective: Q2.2 What is the role of the database in the enterprise?

7) Network Database

Diff: 2

Objective: Q2.2 What is the role of the database in the enterprise?

8) Relational Database

Diff: 2

Objective: Q2.2 What is the role of the database in the enterprise?

Answers: 6) C 7) B 8) A

9) Who are the people responsible for establishing policies for database security?

- A) Database administrators and system users
- B) Internal auditors and security personnel
- C) Internal auditors and database administrators
- D) Database administrators and security personnel

Answer: C

Diff: 1

Objective: Q2.2 What is the role of the database in the enterprise?

10) When retrieving data from a hierarchical database, which of the following is false?

- A) You need to know the record address of the data.
- B) You need to understand the database structure.
- C) You need to know how the tables are related.
- D) You need to understand the parent/child record relationship.

Answer: C

Diff: 2

Objective: Q2.2 What is the role of the database in the enterprise?

11) When retrieving data from a network database, what do you need to know?

- A) Record address
- B) Database table structure
- C) Table names
- D) Primary keys

Answer: A

Diff: 2

Objective: Q2.2 What is the role of the database in the enterprise?

12) What is an operational database and a data warehouse? How are they different?

Answer: An operational database stores data related to operating a business. The data is collected from enterprise accounting transactions, such as vendor transactions, customer transactions, and employee payroll. It also includes data about people, for example customers, vendors, and employees. The data is stored primary keys so specific data may be retrieved.

A data warehouse stores data from a variety of sources. The data may be current, historical, or future estimates.

The difference is the data in an operational database is used for routine business activities. The data in a data warehouse is used for business intelligence to improve management decision making.

Diff: 2

Objective: Q2.2 What is the role of the database in the enterprise?

13) What are the structures of a relational database, hierarchical database, and a network database? How is data retrieved from each of these types of databases?

Answer: A relational database is structured as tables. A record is a row in one of the tables. The tables are related to each other by including common fields in two or more tables. The common fields are called primary key and foreign key. Data is retrieved by using the relationships between the tables.

A hierarchical database is structured in a hierarchy. Records are categorized as parent or child records. In this type of database a parent record may have many child records but a child record can have only one parent record. Data is retrieved by using record addresses.

A network database is structured as a network, or multi-dimensional web. Records are categorized as parent or child records. In this type of database, a parent record may have many child records and a child record may have many parent records. Data is retrieved by using record addresses.

Diff: 3

Objective: Q2.2 What is the role of the database in the enterprise?

14) What is the difference between a relational database and a network database?

Answer: A relational database stores data in multiple database tables. These tables are related to each other using common fields in two different tables. These common fields are referred to as the primary key and the foreign key. Data is retrieved by using the relationship between tables.

A network database stores data in records that are not grouped into database tables. Data is retrieved using record addresses.

Diff: 2

Objective: Q2.2 What is the role of the database in the enterprise?

15) How are hierarchical databases and network databases similar? How are they different?

Answer: Hierarchical databases and network databases are similar in that they store data in records that are not grouped into database tables. When data needs to be retrieved, instead of using the relationships between tables to retrieve data, hierarchical and network databases use record addresses to search for data. Also, in hierarchical and network databases, records are categorized as parent or child records.

The difference between the hierarchical and network databases is how the records are organized. In a hierarchical database structure, a parent record can have many child records and each child record can have only one parent record, resulting in a hierarchical structure, similar to your ancestry tree. In a network database, a parent record can have many child records and a child record can have many parent records, resulting in a network of records.

Diff: 2

Objective: Q2.2 What is the role of the database in the enterprise?

Objective 3

1) In a hierarchical database, data is retrieved using record addresses.

Answer: TRUE

Diff: 1

Objective: Q2.3 How do I build an accounting database?

2) In a network database, a parent record can have many child records and each child record can have only one parent record.

Answer: FALSE

Diff: 1

Objective: Q2.3 How do I build an accounting database?

3) What IT professionals call people or things, accounting professionals call objects.

Answer: FALSE

Diff: 1

Objective: Q2.3 How do I build an accounting database?

4) A database table that stores data about items a business sells is used in the Sales cycle and the Purchasing cycle.

Answer: TRUE

Diff: 1

Objective: Q2.3 How do I build an accounting database?

5) In a relational database, the database tables should not have any connections to other tables in the database.

Answer: FALSE

Diff: 1

Objective: Q2.3 How do I build an accounting database?

6) An intersection table transforms a many-to-many relationship to two one-to-many relationships.

Answer: TRUE

Diff: 1

Objective: Q2.3 How do I build an accounting database?

7) In a one-to-one relationship, for each record in one database table there are many records in a related table.

Answer: FALSE

Diff: 1

Objective: Q2.3 How do I build an accounting database?

8) The intersection table's primary key is a composite primary key.

Answer: TRUE

Diff: 1

Objective: Q2.3 How do I build an accounting database?

9) A composite primary key consists of two or more foreign keys.

Answer: TRUE

Diff: 1

Objective: Q2.3 How do I build an accounting database?

10) In the Database Builder Realm database programmers work with the database users to identify user requirements.

Answer: FALSE

Diff: 1

Objective: Q2.3 How do I build an accounting database?

Match the database table to the appropriate transaction cycle.

- A) Banking Cycle
- B) Payroll Cycle
- C) Financial Cycle
- D) Sales Cycle
- E) Purchasing Cycle

11) General Ledger

Diff: 1

Objective: Q2.3 How do I build an accounting database?

12) Account Transactions

Diff: 1

Objective: Q2.3 How do I build an accounting database?

13) Time Worked

Diff: 1

Objective: Q2.3 How do I build an accounting database?

14) Employee

Diff: 1

Objective: Q2.3 How do I build an accounting database?

15) Purchase Order

Diff: 1

Objective: Q2.3 How do I build an accounting database?

16) Cash Receipts

Diff: 1

Objective: Q2.3 How do I build an accounting database?

17) Customer

Diff: 1

Objective: Q2.3 How do I build an accounting database?

Answers: 11) C 12) C 13) B 14) B 15) E 16) D 17) D

18) Database _____ store pieces of information about people, events, and objects.

Answer: Fields

Diff: 1

Objective: Q2.3 How do I build an accounting database?

19) Database _____ are used to search the database and retrieve specific data from one or more database tables.

Answer: Queries

Diff: 2

Objective: Q2.3 How do I build an accounting database?

20) _____ tables are placed between two tables with many-to-many relationship to create two one-to-many relationships.

Answer: Intersection

Diff: 2

Objective: Q2.3 How do I build an accounting database?

21) An intersection table's primary key is a(n) _____.

Answer: composite key

Diff: 2

Objective: Q2.3 How do I build an accounting database?

22) Generally, the relationship between a table that stores customer data and table that stores sales order data is _____.

Answer: one-to-many

Diff: 2

Objective: Q2.3 How do I build an accounting database?

23) Generally, the relationship between a table that stores sales order data and a table that stores inventory data is _____.

Answer: many-to-many

Diff: 2

Objective: Q2.3 How do I build an accounting database?

24) To record information about people in a database, you need to following types of tables except?

A) Customer table

B) Item table

C) Employee table

D) Vendor table

Answer: B

Diff: 1

Objective: Q2.3 How do I build an accounting database?

25) To create a relational database based on the payroll cycle, which types of data should be recorded in the database?

- A) Employee information and sales invoices
- B) Employee information and number of hours worked
- C) Number of hours worked and inventory information
- D) Number of hours worked and purchase orders

Answer: B

Diff: 2

Objective: Q2.3 How do I build an accounting database?

26) To create a relational database based on the purchasing cycle, which types of data should be recorded in the database?

- A) Vendors, Inventory items, Invoices
- B) Inventory items, Purchase orders, Invoices
- C) Vendors, Inventory items, Purchase orders
- D) Customers, Purchase orders, Invoices

Answer: C

Diff: 2

Objective: Q2.3 How do I build an accounting database?

27) Which of the following tables is least likely to be used in the Payroll cycle?

- A) Time Worked
- B) Cash Payment
- C) Cash Receipts
- D) Withholding

Answer: C

Diff: 2

Objective: Q2.3 How do I build an accounting database?

28) Which statement is true regarding a one-to-many relationship?

- A) For each one record in one database table there is one record in the related table.
- B) This type of relationship is problematic when building a database and must be eliminated using an intersection table.
- C) One-to-many relationships are the most common type of relationships in a relational database.
- D) Many records in one table relate to many records in a related table.

Answer: C

Diff: 1

Objective: Q2.3 How do I build an accounting database?

Use the database tables below to answer the following questions.

VENDORS	PURCHASE ORDERS	ITEMS	PO LINE
Vendor ID Vendor Name Street Address City State ZIP Country	PO No PO Date Item No Shipping Vendor ID	Item No Item Name Item Desc Sale Price	PO No Item No

29) Which field in the PURCHASE ORDERS table is a foreign key?

- A) PO No
- B) PO Date
- C) Shipping
- D) Vendor ID

Answer: D

Diff: 2

Objective: Q2.3 How do I build an accounting database?

30) Which table's primary key has a composite primary key?

- A) VENDORS
- B) PURCHASE ORDERS
- C) ITEMS
- D) PO LINE

Answer: D

Diff: 1

Objective: Q2.3 How do I build an accounting database?

31) Which of the relationships below is a many-to-many relationship?

- A) VENDORS, PURCHASE ORDERS
- B) PURCHASE ORDERS, ITEMS
- C) ITEMS, PO LINE
- D) PO LINE, VENDORS

Answer: B

Diff: 1

Objective: Q2.3 How do I build an accounting database?

32) The _____ table is an intersection table.

- A) VENDORS
- B) PURCHASE ORDERS
- C) ITEMS
- D) PO LINE

Answer: D

Diff: 1

Objective: Q2.3 How do I build an accounting database?

33) By using an intersection table, which field can be removed from the PURCHASE ORDERS table?

- A) PO No
- B) PO Date
- C) Item No
- D) Shipping

Answer: C

Diff: 1

Objective: Q2.3 How do I build an accounting database?

Use the database tables below to answer the following questions.

Employees	TimeSheet	Projects	TS Line
Employee ID First Name Last Name Street Address City State Zip Code Phone Number	Time Sheet ID Week Ending Project ID Employee ID Total Hours	Project ID Project Name Project Desc	Time Sheet ID Project ID Hours

34) Which field in the TimeSheet table is a foreign key?

- A) Time Sheet ID
- B) Employee ID
- C) Total Hours
- D) Week Ending

Answer: B

Diff: 3

Objective: Q2.3 How do I build an accounting database?

35) Which table's primary key has a composite primary key?

- A) Employees
- B) TimeSheet
- C) Projects
- D) TS Line

Answer: D

Diff: 3

Objective: Q2.3 How do I build an accounting database?

36) Which of the relationships below is a many-to-many relationship?

- A) TimeSheets, Projects
- B) Employee, TimeSheets
- C) TimeSheets, TS Line
- D) Projects, TS Line

Answer: A

Diff: 3

Objective: Q2.3 How do I build an accounting database?

37) Which table is an intersection table?

- A) TimeSheets
- B) TS Line
- C) Employees
- D) Projects

Answer: B

Diff: 1

Objective: Q2.3 How do I build an accounting database?

38) By using an intersection table, which field can be removed from the TimeSheet table?

- A) Week Ending
- B) Total Hours
- C) Employee ID
- D) Project ID

Answer: D

Diff: 1

Objective: Q2.3 How do I build an accounting database?

39) All the following statements about intersection tables are true except?

- A) Intersection tables remove many-to-many relationships.
- B) Only one field in an intersect table is needed to uniquely identify a record.
- C) An intersection table's primary key is a composite key.
- D) The primary key for the intersection table includes the foreign keys of the tables.

Answer: B

Diff: 2

Objective: Q2.3 How do I build an accounting database?

40) In which phase of the SDLC is the database documented using entity relationship diagrams?

- A) Analysis phase
- B) Design phase
- C) Build/Buy phase
- D) Install phase

Answer: B

Diff: 2

Objective: Q2.3 How do I build an accounting database?

41) In which phase of the SDLC is DBMS software used to transform the database model into an actual database?

- A) Analysis phase
- B) Design phase
- C) Build/Buy phase
- D) Install phase

Answer: C

Diff: 1

Objective: Q2.3 How do I build an accounting database?

42) What are the basic steps for creating an accounting database?

Answer:

Step 1: Identify and build database tables

Step 2: Identify and enter fields for each database table

Step 3: Select primary keys

Step 4: Identify and build relationships among the database tables

Diff: 1

Objective: Q2.3 How do I build an accounting database?

43) What is the purpose of a foreign key? Provide an example.

Answer: A foreign key is a primary key in one table that appears in a second table to connect or relate the two tables. For, example in Customer table the primary key is Customer ID. This field will also be in the Sales Order table. The primary key of the Sales Order table is Order Number. By including the primary key in of Customer table in the Sales Order table the two table are connected (related) and each sales order is associated with a customer.

Diff: 2

Objective: Q2.3 How do I build an accounting database?

44) Describe the types of relationships possible between tables in a relational database. Indicate whether each relationship is desirable in a relational database.

Answer:

One-to-one: In this relationship, for each record in one table there is one record in the related table. This is a desirable relationship in a relational database.

One-to-many: In this relationship, for each record in one table there are multiple records in the related table. This is a desirable relationship in a relational database.

Many-to-many: In this relationship, multiple records in one table relate to multiple records in the related table. This is an undesirable relationship in a relational database.

Diff: 2

Objective: Q2.3 How do I build an accounting database?

45) What are the basic steps for creating an intersection table?

Answer:

Step 1: Identify a many-to-many relationship between two tables

Step 2: Build a new table to create two one-to-many relationships

Step 3: Create the composite primary key by adding the primary keys of the tables with the many-to-many relationship

Diff: 2

Objective: Q2.3 How do I build an accounting database?

46) What is a composite primary key and what is its purpose?

Answer: A composite primary key consists of two or more fields that together uniquely identify one record. Composite keys are usually found in intersection tables and are the primary keys of the two tables involved in the many-to-many relationship.

Diff: 2

Objective: Q2.3 How do I build an accounting database?

47) Describe the possible types of database issues or anomalies.

Answer:

Deletion problem: This occurs when deleting record, such as a customer, vendor, or inventory item, will result in the deletion of other records contain data vital to future activities or reports.

Update problem: This occurs when updating a record requires making the same changes to other records or when the database does not store important data.

Insertion problem: This occurs when a unique identifier but that piece of data has not been created. For example, requiring an invoice number to add a customer record, however, customer has not purchased anything yet.

Diff: 2

Objective: Q2.3 How do I build an accounting database?

Objective 4

1) Normalization is the process of increasing data redundancy in a relational database.

Answer: FALSE

Diff: 1

Objective: Q2.4 What is database integrity?

2) To maintain entity integrity, a relational database designer will allow multiple records to have the same primary key value.

Answer: FALSE

Diff: 1

Objective: Q2.4 What is database integrity?

3) To maintain primary key integrity, a relational database designer will not allow a primary key to have a null (empty) value.

Answer: TRUE

Diff: 1

Objective: Q2.4 What is database integrity?

4) Referential integrity ensures data is consistent throughout the database.

Answer: TRUE

Diff: 1

Objective: Q2.4 What is database integrity?

5) Database anomalies can be removed by the process of _____.

Answer: Normalization

Diff: 1

Objective: Q2.4 What is database integrity?

To answer the following questions, refer to the database below.

VENDOR ORDERS	
🔑	VENDOR ID
	VENDOR NAME
	STREET ADDRESS
	CITY
	STATE
	PHONE
🔑	PO NO
	PO DATE
	PO BALANCE
🔑	ITEM NO
	ITEM NAME
	QUANTITY
	ITEM COST

6) The following statements regarding the Vendor Orders table above are true except

A) The database does not break the referential integrity rule.

B) The database requires a PO number and an item number to add a vendor record.

C) Deleting a vendor will also delete inventory information.

D) The database requires entering the same vendor contact information multiple times.

Answer: A

Diff: 2

Objective: Q2.4 What is database integrity?

7) To add a vendor to the Vendor Orders table, the following information is required except

- A) Vendor name
- B) Vendor ID
- C) Item Number
- D) PO Number

Answer: A

Diff: 1

Objective: Q2.4 What is database integrity?

8) The Vendor Orders table contains the following database anomalies except

- A) Deletion problem
- B) Insertion problem
- C) Normalization problem
- D) Update problem

Answer: C

Diff: 1

Objective: Q2.4 What is database integrity?

9) The following statements are part of the process of normalizing this database except

- A) Create a Vendor table to store vendor information.
- B) Create a Purchase order table to store purchase order and inventory items information.
- C) Create an Item table to store inventory items.
- D) Create a Purchase Order table to store purchase order information.

Answer: B

Diff: 2

Objective: Q2.4 What is database integrity?

10) Normalization is an optimization process that minimizes which of the following?

- A) Database access
- B) Redundancy
- C) Unauthorized access
- D) Database integrity

Answer: B

Comment: Modified CISA test question

Diff: 1

Objective: Q2.4 What is database integrity?

11) When a database has been normalized, which of the following is true?

- A) The database has an increased chance of redundancies.
- B) The database has an increased chance of inconsistencies.
- C) The database requires the user to enter data twice.
- D) The database tables do not have a many-to-many relationship.

Answer: D

Diff: 1

Objective: Q2.4 What is database integrity?

12) Which database integrity rule ensures each record may be retrieved from the database using a unique identifier?

- A) Domain Integrity
- B) Primary Key Integrity
- C) Entity Integrity
- D) Referential Integrity

Answer: C

Diff: 2

Objective: Q2.4 What is database integrity?

13) When requiring a user to select from a list to enter data, such as the state in an address, the database is conforming to which database integrity rule?

- A) Referential Integrity
- B) Domain Integrity
- C) Primary Key Integrity
- D) Entity Integrity

Answer: B

Diff: 2

Objective: Q2.4 What is database integrity?

Use the database table below to answer the following questions.

VENDOR ORDERS	
🔑	VENDOR ID
	VENDOR NAME
	STREET ADDRESS
	CITY
	STATE
	PHONE
🔑	PO NO
	PO DATE
	PO BALANCE
🔑	ITEM NO
	ITEM NAME
	QUANTITY
	ITEM COST

14) You are an accountant at a small company and you are reviewing the vendor database table. Identify the database anomalies shown and explain how they impact this database.

Answer: This database contains the deletion anomaly, update anomaly, and the insertion anomaly.

The deletion anomaly in this database prevents the deletion of a vendor. If a vendor was deleted, the information for a purchase order would also be deleted, deleting the purchase order information which is needed for various management and financial reports.

The update anomaly in this database means if the phone number for a vendor changes, additional records would need to be updated to reflect that change.

The insertion anomaly in this database means a new vendor cannot be added to the database until the company submits a purchase order to the vendor.

Diff: 3

Objective: Q2.4 What is database integrity?

15) What suggestions would you give the database designer? How should the database be created to eliminate the database anomalies? (Be specific.)

Answer: The single table should be divided into 4 tables. One table for vendor information, one table for item information, one table for purchase order information, and one intersect table. The graphic below provides field names and primary keys.

Diff: 3

Objective: Q2.4 What is database integrity?

16) An audit of customer records in the accounting database reveals data in the state field was entered inconsistently. Some customers' states were entered using the two letter abbreviation (MO, CA, or IA) and others were spelled out (Missouri, California, or Iowa). Which database integrity rule is not being followed? What type of controls can be implemented to prevent this in the future?

Answer: The database integrity rule 3: domain integrity is not being followed.

To prevent this in the future, the state field in the onscreen entry form should be changed to a list of the states. The user selects the appropriate state for the customer.

Diff: 2

Objective: Q2.4 What is database integrity?

17) What is entity integrity in a database? What happens when a database does not have or enforce entity integrity?

Answer: Entity integrity is the database integrity rule number 1. It states that each record in the database must have a unique identifier (i.e., a unique primary key). No two records in the database table can have the same primary key value. This ensures that each record can be retrieved from the database using the unique identifier, such as customer number.

If a database does not enforce entity integrity, the database may have deletion problems (deleting too much data or the wrong data) and update problems (required to update multiple records).

Diff: 1

Objective: Q2.4 What is database integrity?

18) What is primary key integrity? What happens when a database does not have or enforce primary key integrity?

Answer: Primary key integrity is the database integrity rule number 2. It states that the primary key value cannot be null (empty). Each record must have a value for the primary key field.

If a database does not enforce primary key integrity, the database may have insertion problems (data may be entered without a unique identifier). This results in data redundancy, and increases the risk of not being able to retrieve that data.

Diff: 1

Objective: Q2.4 What is database integrity?

19) What is referential integrity? What happens when a database does not have or enforce referential integrity?

Answer: Referential integrity is the database integrity rule number 4. It states that data referenced and stored in related tables must be consistent across the database. For example, a customer address should be the same in any table in which it is referenced. Referential integrity is improved when the customer address, for example, is stored in one location only, eliminating the possibility of the address differing from table to table.

If a database does not enforce referential integrity, the database may have deletion problems (not deleting all the data) and update problems (required to update multiple records).

Diff: 1

Objective: Q2.4 What is database integrity?

Objective 5

1) The bookkeeper at the retail store Cycle Bikes enters adjusting entries using an onscreen journal. This indicates that Cycle Bikes has a manual accounting system.

Answer: FALSE

Diff: 1

Objective: Q2.5 What are the differences between a manual accounting system and a database system?

2) In a database accounting system, the following is true except

A) Transactions are entered using onscreen database forms.

B) Adjustments are made using an onscreen journal.

C) Closing entries are made manually with debits and credits.

D) Account information is stored in database tables.

Answer: C

Diff: 1

Objective: Q2.5 What are the differences between a manual accounting system and a database system?