

Study Guide

Chapter 7 Topics:

DBMS - functions are Protecting data, organizing data, storing important data, and performing routine tasks.

☒ Individuals use **personal databases** to store addresses/contact information/keep track of important dates/keep track of valuables.

☒ A table in a **Relational Database** has rows and columns.

☒ **Attribute** is a column in a table and contains values of the same type.

Key - A field in a record that is used to identify the record

Primary key - A field that uniquely identifies a record prevents duplicate records from occurring in a table.

☒ The **Relational Model** is the most popular type model that links tables through common fields. uses One-to-many(most common); one-to-one; many-to-one

☒ **Data Manipulation Language** - specific language provided with the DBMS that allows people and other database users to access, modify, and make queries about data contained in the database, and to generate reports.

☒ **Data mining** - process of extracting data from a data warehouse

☒ **Distributed database** - Data Base that extends from Head Quarters to Warehouses/Retail Outlets etc.

Chapter 8 Topics:

Wi-Fi technologies helped move e-commerce from desktops to mobile devices.

☒ The iPhone is credited with having created a market for online mobile apps.

☒ Examples of **Transaction Processing Systems (TPS)** : Cash register/Atm, anything that supports/records transactions

☒ examples of **Business-to-Business** : *Global supply chain management (GSM)*

Business-to-Consumer : Retail stores

Consumer-to-Consumer : Ebay/Craigslist/other trading

☒ Shopping by the web allows consumers to comparison shop and read customer reviews

☒ **Near Field Communications (NFC), RFID, Infrared, and Bluetooth** All private, close range communications.

☒ **M-Commerce** - form of e-commerce that takes place over wireless mobile devices such as handheld computers and cell phones.

Chapter 9 Topics:

Decision making involves three steps - **Intelligence, Design, and Choice.**

☒ **Stages of design** - Intelligence Stage > Design Stage > Choice Stage > Implementation > Monitoring

☒ **Programmed decisions** - involve routine situations with known solutions

☒ **Non-Programmed decisions** - involve unusual or exceptional situations

☒ **Optimization model** - finds the best solution

☒ **MIS** - pulls data from one or more databases, sifts through the data and produces useful reports.

☒ Another term for **MIS** is **Business Intelligence**

☒ **Decision Support System (DSS)** - focuses on unstructured and semistructured problems.

Chapter 10 Topics:

Project Leader , Project Coordinator, Project Manager - plan, monitor, and control necessary development activities.

☒ **Offshoring** - relocates an entire production line to another location, typically in another country with cheaper labor, lower taxes, or other financial benefits.

Outsourcing - business' use of an outside company to take over portions of its workload.

Globalization - When a company makes the product available internationally

☒ **Request for Proposal** - generated when an organization wants in IT Vendor to submit a bid for a new or modified system

Chapter 11 Topics:

Total Information Security – involves securing all components of the global digital information infrastructure. Personal Computers.

Business Computer Systems. Government Systems International Systems

Credit Card fraud - makes up 20 percent of the ID theft cases

Protection of individual property can take many forms including **copyrights, trademarks, trade secrets, and patents.**

Copyright protects the rights of an individual for life plus 70 years

Trademark/Patent/Trade secret – Establishes intellectual property (product of the mind or intellect over which the owner holds legal entitlement.)

Software patches - corrections to software errors or vulnerabilities

- ☒ The most common cause of data loss is **hardware failure**
- ☒ **incremental** - A backup that stores the files that have changed since the last
- ☒ **War driving** - Driving around fishing for Wifi to commit identity fraud

Chapter 12 Topics:

- ☒ **Carpal Tunnel Syndrome** - example of Repetitive Stress Disorder.
- ☒ **Solid State Drives** - have no moving parts and are faster and use less energy than regular hard drives.
- ☒ **Censorship** - when a government or authority controls speech and other forms of expression.
- ☒ **Content filtering software** - works with a web browser to limit what a user can access.
- ☒ **Privacy issues** that you should be concerned with include freedom from intrusion, freedom from surveillance, and control over the information collected about one's self.
- ☒ **Cookies** - Programs that record search information and incorporating it into advertisement
- ☒ Know the **P2P (peer-to-peer)** - networks used to share files
- ☒ **Digital divides** can be based upon sex, ethnicity, race, age, income, location, and disability

Chapter 7 OUTLINE/SUMMARY

- **Databases and Database Management Systems (DBMS)** - transform large quantities of data into specific/valuable info
- **DBMS** - group of programs that manipulate the database and provide an interface between the database and the user or the database and application programs.
- Fields are set to hold specific types of data.
- Characters > Fields > Records > Files > Database
- **Primary key**: A field that uniquely identifies a record
- **relational database** - tables are linked (related) through common fields.
- One-to-many, Most typical, Makes use of primary key
 - * One-to-one
 - * Many-to-many
- **Data analysis** is a process that involves evaluating data to identify problems with the content of a database.
- **Data Integrity** refers to the accuracy of the data in a database.
- Database Types: Single User vs. Multiuser General-Purpose vs. Special-Purpose
- **schema** - outline of the logical and physical structure of the data and relationships among the data in the database.
- **data dictionary** - provides a detailed description of all data used in the database.
- power of a database and DBMS lies in the user's ability to manipulate the data to turn up useful information
- Data can be sifted, sorted and queried through the use of data manipulation languages
- **Data Manipulation Language (DML)** is a
- **Structured Query Language (SQL)**: The most popular DML
- **Data Warehouse**: A database that holds important information from a variety of sources.
- **Data Mart**: A small data warehouse, often developed for a specific person or purpose.
- **Data Mining**: the process of extracting information from a data warehouse.
- **Business Intelligence** is the use of data mining to help increase efficiency, reduce costs, or increase profits.
- The Web is frequently used as the Front End of DBMS's.

Visual, audio, and unstructured database systems organize non-textual data.

- **database administrator (DBA)** is a skilled and trained computer professionals who directs all activities related to an organization's database, including providing security from intruders.

Chapter 8 OUTLINE/SUMMARY

- **E-Commerce** refers to systems that support electronically executed business transactions
- **EDI** uses private communications networks called value-added networks (vans) to transmit standardized transaction between partners and suppliers.
- A **transaction** is an exchange or transfer of goods, services, or funds
- **Transaction Processing System (TPS)** is an information system that supports and records transactions.
- Data collected in Transaction Processing Systems feeds into more sophisticated Management Information Systems (MIS's) to provide useful information.
- Data Collection > Data Editing > Data Correction > Data Manipulation > Data Storage > Data Output
- Transaction Processing Systems - variety of TPS's that serve various functions within an organization.
- Types of E-commerce : **Business-to-consumer (B2C)** **Business-to-business (B2B)** **Consumer-to-consumer (C2C)**
- **E-tailing** has dramatically influenced the way people shop by providing customers with product information and the ability to comparison shop.
- **Global supply chain management (GSM)** provides methods for businesses to find the best deals on the global market for raw materials, and supplies needed to manufacture their products.
- **Online clearinghouses, Web auctions, and marketplaces** provide a platform for businesses and individuals to sell their products and belongings
- **electronic exchange** is an industry specific Web resource created to provide a convenient centralized platform for B2B e-commerce among manufacturers, suppliers and customers.
- Many banking, finance and investment transactions now occur online.
- **M-commerce** is a form of e-commerce that takes place over wireless mobile devices such as handheld computers and cell phones.
- Popular m-commerce products and services include ring tones, games, music, videos, messaging services, etc.

- *Wireless Application Protocol (WAP)* used to create m-commerce applications.
- *Wireless Markup Languages (WML)* used to create Web pages and applications for small displays.
- Infrared and Bluetooth for close range, device-to-device communications.
- *M-commerce Delivery* : Through cell phone service provider . over the mobile Web. Through SMS Texting. Through short-range wireless data communications
- *Proximity payment systems* make use of Infrared, Near Field Communication (NFC), or RFID technologies to support contactless payments using a cell phone.
- *e-commerce host* is a company that takes on some or all of the responsibility of setting up and maintaining an e-commerce system for a business or organization.
- E-commerce implementation requires investment in: Infrastructure, Hardware and Networking, Software
- Web services are programs that automate tasks by communicating with each other over the Web.
- *E-cash* is a Web service that provides a private and secure method of transferring funds from a bank account or credit card to online vendors or individuals for e-commerce transactions.
- *localization*, companies hire international Web developers to assist with translating Web site content into different languages for different cultures.
- Security Issues :
- Identity Verification
- A *digital certificate* is a type of electronic business card that is attached to Internet transaction data to verify the sender of the data. [www.verisign.com]
- *Encryption* uses high-level math functions and computer algorithms to encode data.

Chapter 9 OUTLINE/SUMMARY

Decision Making & Problem Solving Process :

- Programmed decisions : Structured situations with well defined relationships. Quantifiable
- Non-programmed decisions : Ill-structured situations with vague or changing relationships between variables. Not easily quantifiable in advance
- A MIS sheds light on a wide-range of common, day-to-day business decisions.
- A DSS supports decision making for specific unique and difficult decisions.
- An **optimization model** finds the best solution, usually the one that will best help individuals or organizations meet their goals.
- **Heuristics**, often referred to as “rules of thumb”—commonly accepted guidelines or procedures that usually find a good solution, but not necessarily the optimal solution—are often used in the decision-making process.
- **Management Information Systems (MIS)** - MIS: an information system designed to provide routine information to managers and decision makers
- **Business intelligence (BI)**: Technologies that are used to gather and report information that supports intelligent business decision making.
- **Scheduled Reports** are produced periodically on a schedule; daily, weekly, monthly, quarterly, annually, ect.
- **Demand Reports** are developed to get certain information at a person’s request.
- **Exception Reports** are automatically produced when a situation is unusual or requires action.
- **Enterprise Resource Planning - ERP**: integrates all data processing in an enterprise into one unified system that draws from a common database system.
- **Transaction Processing System (TPS) > Management Information System (MIS) > Decision Support System (DSS) > Expert System (ES)**
- **decision support system (DSS)** is an information system used to support problem-specific decision making.
- **What-if analysis** is the process of making hypothetical changes to problem data and observing the impact on the results.
- **Goal-seeking analysis** is the process of determining what problem data is required for a given result.
- **GDSS** or computerized A collaborative work system is designed to provide effective support in group decision-making settings.
- GDSS software, called **groupware**, helps with joint work group scheduling, communication, and management.
- A **knowledge management (KM)** system assists an organization in capturing, storing, and distributing knowledge for use and reuse by the organization and sometimes by its partners and customers.
- **geographic information system (GIS)** is capable of storing, manipulating, and displaying geographic or spatial information including maps of locations or regions around the world.
- **Informatics** combines traditional disciplines, like science and medicine, with computer systems and technology.

Chapter 10 OUTLINE/SUMMARY

- **Systems development** is the activity of creating new or modifying existing information systems.
- The **systems development life cycle (SDLC)** is the ongoing activities associated with the system development process including investigation, analysis, design, implementation, and maintenance and review.
- **Systems Analyst**: professional who specializes in analyzing and designing systems.
- Non-tech users are becoming increasingly involved in system and software development in businesses and organizations. Why?
- They understand the problems at hand
- They are increasingly technically savvy
- Software development tools are increasingly easier to use
- Programmers are not able to keep up with organization demands
- **Computer-aided software engineering (CASE) tools** automate many of the tasks required in a systems development effort
- A **flowchart** is a system design diagram that charts the path from a starting point to the final goal of a system.
- A **decision table** is a systems development tool that displays the various conditions that could exist in a system and the different actions that the computer should take as a result of these conditions.