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/Cragslist/other trading

- Shopping by the web allows consumers to comparison shop and read customer reviews
- **Near Field Communications (NFC), RFID, Infared,** 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 communictaions
- ***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, annualy, 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 systemthat 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.