

Highlights from Connect Master: Management Information Systems

- Investigating MIS 11/29/23
support business operations through technology
- Investigating MIS 11/29/23
technologies to schedule, monitor, and make decisions
- The Impact of MIS on Management Theory 11/29/23
Technology has had a major impact on the way people communicate
- Early Management Theorists: The 1700s 11/29/23
Smith also developed the concept of the invisible hand, which argues that individuals and businesses determine voluntarily what to buy and sell and that any attempt to legislate this would result in inefficiencies
- Management Theorists in the 1800s 11/29/23
managers had five major roles, including planning, organizing, staffing, directing, and controlling
- Management Theorists in the 1900s 11/29/23
“Do what you do best and outsource the rest.”
- Mainframes and Personal Computers 11/29/23
Mainframes were developed to be reliable for transaction processing systems.
- Mainframes and Personal Computers 11/29/23
PCs are used for every conceivable managerial use
- How Businesses Use Computer Systems 11/29/23
A server is a computer designed for a specific purpose such as data storage, backups, printing, and communication, among other things. Most business networks provide a method for PCs to access servers so that employees can share resources.
- How Businesses Use Computer Systems 11/29/23
any Internet-capable device can access powerful computing capability available online.
- How Businesses Use Computer Systems 11/29/23
To avoid the expense of setting up individual client-server networks, many businesses simply use Cloud storage, primarily provided through companies such as Amazon and Google, to store this data securely. Additionally, cloud computing allows users to access virtual applications software, such as database software, through the Internet.
- Transactions Processing Systems 11/29/23
POS systems must include tracking sales and taxes and much more. POS systems software now provides discount calculations, inventory tracking, ordering, vendor communications, a customer relationship management interface, bookkeeping, and accounting capability.
- Transactions Processing Systems 11/29/23

A typical retail POS station may integrate the cash register system with multiple input devices, such as barcode scanners, scales, touchscreens, MICR (check) readers, credit/debit card readers, often with separate tactile numerical keyboards (usable by the blind), cameras, RFID tag readers, among others.

- Scheduling and Decision Support Systems 11/29/23
Decision support systems (DSS) assist middle managers with organizational processes when a large number of inputs are changing rapidly
- Supply Chain Management Systems 11/29/23
Supply chain management generally consists of four components; supply chain planning, supply chain sourcing (partners, suppliers), manufacturing and assembly (operations), and supply chain logistics (delivery and return)
- Human Resources Management Systems 11/29/23
The primary functions performed by HR management systems include forecasting, recruiting, selection, hiring, evaluation, training, retention (reassignment, promotion, and grievance management), scheduling, and compensation (payroll and benefits administration).
- Marketing Information Systems 11/29/23
marketing research and environmental scanning, customer feedback, industry trends, and the advertising campaigns
- Learning Management Systems 11/29/23
LMS include delivering and administering class activities and assignments, tracking student performance through gradebook management, reporting student attendance and performance, and documenting student activity
- Executive Support Systems and Enterprise Resource Planning Systems 11/29/23
(ERP) integrates the management of nearly all aspects of an organization
- Executive Support Systems and Enterprise Resource Planning Systems 11/29/23
ERP include finance and accounting systems, human resource systems, production systems, logistics (supply chain management) systems, customer resource management systems, sales and marketing systems, and many others depending on the type of organization
- Work-Life Balance 11/29/23
MIS enable many to use flexible work schedules, to telecommute, and to work from home. Often this is at the cost of never actually taking a break
- Databases 11/30/23
you are interacting with databases from the time you wake up in the morning until you set down your last digital device at night
- Database and DBMS Overview 11/30/23
A database is a collection of data that is organized in a manner that allows a computer to quickly search for and retrieve information. It is a collection of tables and the relationships between those tables
- Database and DBMS Overview 11/30/23

A DBMS is a software program designed to organize and administer a database. A database is a collection of tables, relationships, and metadata. A DBMS helps to organize the data found in a database

- How a DBMS Can Solve File Management Issues 11/30/23
Data redundancy refers to the duplication of data.
- How a DBMS Can Solve File Management Issues 11/30/23
The use of a DBMS makes it is easier to secure data and information.
- How a DBMS Can Solve File Management Issues 11/30/23
Decreased data inconsistency .
- How a DBMS Can Solve File Management Issues 11/30/23
The use of a DBMS makes it is easier to secure data and information.
- Relational Databases 11/30/23
Relational databases use links called relationships between tables. Tables are used to hold information about the objects to be represented in the database. Information in tables is stored in rows called records or objects , and columns called fields .
- Relational Databases 11/30/23
Some of these include objects (such as items in stock or inventory), events (such as transactions or item returns and exchanges), people (such as customers, employees, and vendors), and places (such as procurement centers or wholesalers).
- Tables, Keys, and Referential Integrity 11/30/23
A table in a database is a collection of associated records
- Tables, Keys, and Referential Integrity 11/30/23
A primary key is a special field designated to uniquely identify all records in a table. A primary key must contain a unique value so there can be no way that two records could have the same value.
- Tables, Keys, and Referential Integrity 11/30/23
Referential integrity refers to the accuracy and consistency of data within a table relationship in a databas
- Fields and Records 11/30/23
A record is a row in a table that includes a collection of field
- Fields and Records 11/30/23
A field is a column in a table that represents a characteristic of something or someone
- Data Definition and Data Dictionaries 11/30/23
Metadata are data that describes the data. In a database, it can be thought of as a summary of the database's data
- Using SQL for Queries, Forms, and Reports 11/30/23
It is a request for information from one or more tables in a database and is generated using a specific query language, which most often is SQL.

- Using SQL for Queries, Forms, and Reports

programming language used for human interface and communication with relational databases and is considered the standard database language

11/30/23
- Data Normalization and Entity Relationship Diagrams

An entity relationship diagram (ERD) is a method used to structurally represent a database design via the use of diagrams. An ERD involves the use of different symbols and connectors that help to visualize two different types of information: the entities within the system and the interrelationships among these entities.

11/30/23
- The Four Vs of Big Data

Big Data allows organizations to use analytics to help uncover a variety of predictive behaviors to help create new offerings. The four Vs are the common characteristics of Big Data: volume, variety, veracity, and velocity.

11/30/23
- Business Intelligence

BI systems are data-driven decision support systems (DSS)

11/30/23
- Data Warehouses and Data Marts

A data warehouse is a repository of data and information that organizations analyze to make informed business and operational decisions.

11/30/23
- OLAP (Online Analytical Processing)

Some of these include report creation and analysis, analytic calculations, forecasting, budgeting, planning, and what-if predictive analysis.

11/30/23
- Data Mining

Data mining is executed using mathematical algorithms that segment the data and evaluate the likelihood of future events. It is a multidisciplinary skill that uses machine learning, statistics, AI, and database technology

11/30/23
- Data Mining

Data mining is also referred to as knowledge discovery

11/30/23
- Policies and Administration

An organization's database is a critical asset, and ensuring its security and structure is critical. Information policies specify the rules used in database design (how data are structured), who has access to the data, how the data are collected and maintained, and where information and data are distributed.

11/30/23
- Policies and Administration

Data governance policies help to ensure that an organization's data are valid, understandable, complete, and accessible

11/30/23
- Policies and Administration

Common data administration tasks include the development of information policies, data planning, database design, security, and how internal users and end users use data

11/30/23

- The Role of a Database Administrators

These database administrators have a number of responsibilities when it comes to database management, including development, operation, backup and recovery, and adaptation.

11/30/23
- Data Analytics

analyze and extract appropriate data to assist businesses in decision making

2/5/24
- The Process of Data Analytics

“what happened?”

2/5/24
- The Process of Data Analytics

predicting, and planning for future events and business outcomes. Predictive analytics utilizes probability analysis

2/5/24
- The Process of Data Analytics

Prescriptive analytics seeks to predict what, when, and why a given scenario might occur.

2/5/24
- Trends in Data Analytics

AI that is designed to be more responsive, smarter, and scalable will allow for better learning algorithms and shorter development times

2/5/24
- Uses of Data Analytics in Business

Data can be analyzed to find trends and to create a more customer-focused approach and strategy

2/5/24
- Ecosystems

data project life cycle .
The Data Science Ready project from Harvard University outlines the five steps of the data project life cycle as sensing, collecting, wrangling, analysis, and storage.

2/5/24
- Responsibilities of a Data Analyst

Duties include working on data analytics teams to extract data from large data sets, creating reports that outline key findings, monitoring key performance indicators (KPIs) to identify success or failure, and analyzing data to identify trends.

2/5/24
- How Data Analysts Define a Project's Success

success is data + organizational/business knowledge = problem solved .

2/5/24
- How Data Analysts Define a Project's Success

What is the overall outcome and results that are needed?
Who is the receiver of the information and

2/5/24

analysis?

What is the question that is being asked? Am I answering the question?

- Data-Driven Decision Making 2/5/24
data-driven decision making (DDDM) is the use of facts, metrics, and data to guide strategic business decisions that align with organizational goals, objectives, and initiatives.
- Comparison of Spreadsheets and Databases 2/5/24
Spreadsheets and databases are compared and contrasted in the following table.
- SQL 2/5/24
It allows the user to query data contained in a database, filter for specific data, and to track correlated pieces of data.
- The Basic Syntax of SQL 2/5/24
A query in a database is a question or a request for specific information contained in a database.
- Components of SQL 2/5/24
It is important that in an SQL database the exact syntax be used when writing SQL queries.
- Data Visualization 2/5/24
visualization makes it easier to see the results and conclusions ascertained from data analysis.
- Design Elements That Lead to Misleading Data Visualizations 2/5/24
Disadvantages include the representation of biased or inaccurate information, a correlation that does not accurately represent causation,
- Design Elements That Lead to Misleading Data Visualizations 2/5/24
Data visualizations that include cherry-picked data often ignore or omit data that may contradict the desired conclusion or result. These types of visualizations may mislead and cause false conclusions.
- Design Elements That Lead to Misleading Data Visualizations 2/5/24
Cherry-picking data is the selection and representation of data in a visualization that supports a desired conclusion or result. Data visualizations that include cherry-picked data often ignore or omit data that may contradict the desired conclusion or result. These types of visualizations may mislead and cause false conclusions.
- How to Structure Data Visualizations to Ensure Data Is Appropriately Represented 2/5/24
Color can quickly highlight key points or differences in the data.

- How to Structure Data Visualizations to Ensure Data Is Appropriately Represented 2/5/24
 all data should be represented and displayed.
- Most Popular Charts and Graphs for Data Visualization 2/5/24
 They are used to compare values over long and short periods.
- Most Popular Charts and Graphs for Data Visualization 2/5/24
 They are often used to demonstrate the distribution of data points or to display values across different subgroups of data . They allow for comparing of one group of data to another and comparing which variables occur most frequently or have the highest rating.
- Most Popular Charts and Graphs for Data Visualization 2/5/24
 This allows for the visualization of relationships between the variables. If there is a correlation between the variables, the data points will fall on a line or curve
- Most Popular Charts and Graphs for Data Visualization 2/5/24
 Each slice of a pie chart denotes the quantity/frequency of one variable or data point, and all slices added together equal a whole.
- Tableau 2/5/24
 Tableau is analytics software that offers business intelligence and data visualization across many areas
- Data Anonymization 2/5/24
 Data anonymization aims to protect private or sensitive information by eliminating or encrypting this type of information.
- Data Anonymization 2/5/24
 Healthcare and financial data are two of the most compromised types of data.
- Data Transformation 2/5/24
 Data must be compatible so that it can be used between different systems and computer applications.
- Data Transformation 2/5/24
 data must be transformed to make it easier to analyze. Data can be transformed by changing format, structure, or value.
- Spreadsheets 2/5/24
 Spreadsheets allow business managers to search through and filter large amounts of data in the blink of an eye.
- Spreadsheets 2/5/24
 Spreadsheets are computer programs that allow users to easily arrange, calculate, and present

numerical data.

- Spreadsheet File Management 2/5/24
The comma-separated values format , or CSV format , allows spreadsheet users to share data with other spreadsheet users regardless of which spreadsheet program is being used.
- Common Spreadsheet Characteristics 2/5/24
A cell is the basic unit of any spreadsheet. It is a box where data can be placed. A cell is identified by the cell address, which is a letter and number combination,
- Common Spreadsheet Characteristics 2/5/24
In a spreadsheet, a row is a horizontal line of cells. Rows are identified by numbers.
- Common Spreadsheet Characteristics 2/5/24
The equals sign (=) is the most important symbol in a spreadsheet. The equals sign indicates that the cell holds a formula or function
- Common Spreadsheet Characteristics 2/5/24
In a spreadsheet, a column is a vertical line of cells. Columns are identified by letters.
- Common Spreadsheet Characteristics 2/5/24
named range , which is a range of cells in a spreadsheet. When using tools such as VLookup it is handy to name a range of cells
- Common Spreadsheet Characteristics 2/5/24
When you copy a calculation using the fill handle, the spreadsheet program copies the cell that is in the same relative position. Relative referencing is the default in spreadsheets.
- Common Spreadsheet Characteristics 2/5/24
If you don't want the reference to change, it is possible to define an absolute reference. An absolute reference tells the program to refer to a specific cell when the formula is copied.
- Common Spreadsheet Characteristics 2/5/24
If the cells are not adjoining, use the Ctrl key (or the Command key on a Mac) to select the cells you want
- The Use of Charts and Graphs 2/5/24
When depicting safety items or risk factors, the convention is to use traffic signal colors, with green being safe or less risky, yellow being intermediate risk, and red meaning most dangerous.
- Math Principles Review 2/5/24
When you make a payment for a loan there are several factors that determine the size of the payment. These factors include the amount of the loan when you initially borrowed the money. This is referred to as the Present Value (PV) of the loan. Another factor is the interest rate (Rate) of the loan. This is quoted as an annual percentage rate (APR). Another factor is the term of the loan . The term is the length of the loan. For example, many homeowners take out a 30-year mortgage to purchase their house. The term for this mortgage would be 30 years.
- Math Principles Review 2/5/24
The Rule of 72 says that dividing 72 by the expected interest rate indicates the number of years it will take for the investment to double.

- Cybersecurity Threats, Vulnerabilities, and Exploits

Assets include information, software, and hardware.

2/5/24
- Cybersecurity Threats, Vulnerabilities, and Exploits

cybersecurity threat is an event or condition that has the potential for causing asset loss and the undesirable consequences or impact from such loss

2/5/24
- Cybersecurity Threats, Vulnerabilities, and Exploits

Cybersecurity vulnerabilities are weaknesses or flaws in system security procedures, design, implementation, and control that could be compromised accidentally or intentionally

2/5/24
- Cybersecurity Breaches and Threat Mitigation

Security breaches can occur in a variety of ways, including viruses, spyware, impersonation, and distributed denial of service (DDoS) attacks

2/5/24
- Cybersecurity Breaches and Threat Mitigation

A cybersecurity breach occurs when a hacker gains unauthorized access to an organization's systems, data, and information

2/5/24
- Social Engineering

Social engineering refers to how a criminal uses psychological manipulation to get people to willingly give up confidential information. Social engineering is designed to get individuals to give criminals many types of sensitive information, including passwords, bank information, access to computers or networks, and social security numbers. Social engineering attacks exploit individuals' trust and lack of knowledge about what types of information should be divulged.

2/5/24
- Cybersecurity Goals: Confidentiality, Integrity, and Authentication

Authentication is a process that helps an organization to establish the origin of information or to determine an individual's or entity's identity

2/5/24
- Internal and External Threats to Cybersecurity

The risks include malware, DDoS attacks, ransomware, viruses, and phishing attacks designed to steal information and disrupt system activities. After gaining access, these cybercriminals remain inside the system, sometimes for months, unnoticed and extracting information

2/5/24
- Spyware and Adware

spyware includes the keystrokes a user makes, passwords, account numbers, and other confidential information.

2/5/24

- Bots, Ransomware, Rootkits, and Keyloggers 2/5/24
 Ransomware
 is malware that makes a computer's data inaccessible until a ransom is paid.
- Bots, Ransomware, Rootkits, and Keyloggers 2/5/24
 Another version of ransomware threatens to make
 the victim's personal files public unless the ransom is paid.
- Bots, Ransomware, Rootkits, and Keyloggers 2/5/24
 keylogger or system monitor, is a form of
 spyware/surveillance technology that records all actions typed on a
 keyboard
- Bots, Ransomware, Rootkits, and Keyloggers 2/5/24
 keylogger or system monitor, is a form of
 spyware/surveillance technology that records all actions typed on a
 keyboard.
- Computer Viruses and Trojan Horses 2/5/24
 Viruses can destroy programs or alter the operations of a computer or network.
 Computer viruses, much like a biological flu virus, are designed to spread in
 hosts and have the ability to replicate themselves .
- Data in Transit, at Rest and Storage, and in Process 2/5/24
 describe data that are passing through networks (cellular, Wi-Fi, or other networks)
- Data in Transit, at Rest and Storage, and in Process 2/5/24
 Data at rest
 is a term that is sometimes used to refer to all data in computer storage
- Data in Transit, at Rest and Storage, and in Process 2/5/24
 disaster recovery plan (IT DRP) should be
 developed in conjunction with the business continuity plan.
- The Plan-Protect-Respond Cycle 2/5/24
 Managing communications
 during and after an event with stakeholders, law enforcement, and external
 stakeholders
- The Plan-Protect-Respond Cycle 2/5/24
 planning phase allows the organization to
 design an effective, practical, and relevant information security architecture.
 Having a plan in place is critical to the overall success.
- General Data Protection Regulation (GDPR) 2/5/24
 The law includes a number of key privacy and data
 protection requirements with which organizations must be in compliance.
- Computer Networks and the Internet 3/13/24
 computer network is a group of two or more computers or devices that are

connected together and can share information and resources.

- What Is a Computer Network? 3/13/24
Wide
area network (WAN)
- What Is a Computer Network? 3/13/24
Local
area network (LAN)
- What Is a Computer Network? 3/13/24
Personal
area network (PAN)
- LANs and WANs 3/13/24
LANs are used to connect
devices within a limited geographic range
- Connecting a LAN to the Internet 3/13/24
Connections
to the Internet are provided by an Internet service provider (ISP).
- How the Internet Works 3/13/24
Data are transferred from one network to another through hardware called
routers . Information sent over the Internet is transferred in small groupings
called packets . A router sends each packet to the correct receiving router via
the fastest route possible at the moment it has been transmitted.
- Components of an IP Address 3/13/24
The Domain Name System (DNS) allows IP addresses to be translated
into recognizable words that are much easier to remember
- Components of an IP Address 3/13/24
IPv4 has a four-decimal notation such as
182.124.7.9. This allows for approximately 4 billion IPv4 addresses, far less
than the 7 billion people on Earth. IPv6 is now being adopted.
- Components of an IP Address 3/13/24
You can think
of an IP address much the same as your home address.
- TCP/IP 3/13/24
Transmission Control Protocol/Internet Protocol
(TCP/IP) is a suite of communication protocols used to connect devices to the
Internet. A protocol is a standard, a rule, or a guideline
- The World Wide Web 3/13/24
The web and the Internet are not synonymous. The web is just one
of many applications supported by the Internet. Tim Berners-Lee proposed the
architecture for the web in 1990 and created the first web server, web browser,

and web page.

■ The World Wide Web 3/13/24

Hypertext Transfer Protocol (HTTP): HTTP is a protocol for the transmission of hypermedia documents (such as

HTML) and was designed for communication between web browsers and web servers.

HTTP governs the transfer of data between a client and server computer.

Uniform Resource Locator (URL): URLs are one type of Uniform Resource Identifier (URI). URI is a generic term

for all types of names and addresses that refer to objects and content on the web.

A URL is the address of a document or other content or resource found on the web.

For example, if you want to visit Google you type the URL www.google.com.

Hypertext Markup Language (HTML): HTML

is a commonly used format for publishing web documents and content. With HTML you can create hyperlinks to link or connect various resources on the web.

Hyperlinks are words, phrases, or images that the user can click on to move to a new web document or a new web page.

■ Web 2.0 3/13/24

Web 2.0 refers to the second-generation

Internet that is based on interactivity and dynamic content. This allows people to collaborate and share information online

■ Web 2.0 3/13/24

User participation

■ Geographic Information System (GIS) 3/13/24

Geographic information systems (GIS s) are built

on a foundation provided by the Global Positioning System (GPS). GPS is a navigation system that uses at least 24 satellites to help people find their way across the globe.

■ Geographic Information System (GIS) 3/13/24

GISs

combined with databases and GPS technology to facilitate the transportation of goods from one location to another. Many automobiles are now equipped with GPS that is linked to GIS maps to display location and driving directions.

■ 5G Connectivity and the IoT 3/13/24

5G connectivity will allow for faster

connection speeds, greater data capacity, and lower latency. These enhancements will increase IoT capabilities for both enterprise and home users.

■ 5G Connectivity and the IoT 3/13/24

5G

networks may eventually allow for autonomous vehicles to safely interact with each other and their environment.

■ What Is Cloud Computing? 3/13/24

Google and Amazon Web Services offer Cloud computing centers that can assist organizations with data storage and management, applications management, and increased computing power, all of which can be maintained remotely (i.e., outside of the organization).

- What Is Cloud Computing? 3/13/24
Cloud computing is a computing model where processing, storage, software, applications, and a variety of services are provided over a network, mainly accessed via the Internet. These “clouds” of resources are accessed by individuals on devices connected to the Internet on an as-needed basis. Cloud computing removes the need to have data, files, and software stored directly on a device.
- Cloud Computing in the Business Landscape 3/13/24
Cloud computing has provided alternative solutions for running critical software and applications. Large and small businesses find they can decrease their reliance on internal IT infrastructure and reduce cost by utilizing Cloud-based technologies.
- Benefits of Cloud Computing 3/13/24
Cloud computing offers many benefits to businesses including flexibility, cost savings, collaboration, and disaster recovery.
- Limitations of Cloud Computing 3/13/24
Some of the disadvantages of Cloud computing include downtime, security, limited control, and vendor agreements.
- Cloud Services Security and VPNs 3/13/24
A virtual private network (VPN) creates a secure connection between two computers. VPNs allow for encrypted communications using the Internet as the pathway for data transmission and communication.
- Business Management Systems 3/20/24
A business analyst is one career opportunity for those with an MIS degree. Business analysts focus on using technology to improve business operations. They evaluate IT systems, make recommendations about increasing productivity and efficiency, and oversee the implementation of new information systems while communicating with management about the effect of process changes on the organization’s performance.
- Moore’s Law 3/20/24
Moore’s law states that the number of transistors on a computer chip doubles approximately every 18 months. Additionally, the price of transistors will correspondingly decrease
- Business Management Systems Components 3/20/24
Business management systems need three major components in order to provide the services expected by today’s managers. These include a database management system

(DBMS), a predictive information system, and a decision-making information system.

- Business Management Systems Implementation 3/20/24
This decision has three main options: a personalized, customizable, on-premises solution; a personalized, customizable Cloud-based solution; and an off-the-shelf Software-as-a-Service solution.
- Business Management Systems Implementation 3/20/24
how the new management system will operate with existing systems.
- Business Management Systems Implementation: Interaction with Existing Systems 3/20/24
Managers must ensure the improvements derived from the transition will be worth the expense and the impact to employee morale.
- On-Premises Business Management Systems 3/20/24
IT staff must constantly be aware of all the latest security risks to the system
- Cloud-Based Business Management Systems 3/20/24
Cloud storage sites are typically hardened and deploy substantial security systems that can significantly reduce the risk of hackers. Additionally, server size can easily be scaled as business management software requirements increase. The need to maintain an entire IT team is reduced as there is minimal hardware to be maintained.
- Cloud-Based Business Management Systems 3/20/24
The downside of housing a management solution on the Cloud is that the manager loses control over the costs.
- Human Resource Management Systems 3/20/24
HRM focuses on scanning the environment to determine future HR needs, examining the business to measure current capabilities and shortfalls, and then recruiting, hiring, training, retaining, compensating, appraising, promoting, reassigning, and firing employees. It also includes handling employee grievances and managing absences, leave, or vacations.
- Human Resource Management Systems 3/20/24
HRM involves a significant degree of legal expertise
- The History of Human Resource Management Systems 3/20/24
SAP is a recognized leader in the development of HRM software
- Compensation Management Software 3/20/24

Inappropriate and inconsistent compensation can demotivate the strongest workforce. Whether the firm primarily uses hourly, salaried, or independent contractors, ensuring that these employees are compensated correctly is key to a company's success.

- The Use of Inventory Management Systems in Business 3/20/24
Overstocking
inventory drives up production costs as assets that could be used elsewhere are needlessly tied up in unneeded inventory. Additionally, overstocking inventory can result in lost revenue if the inventory has a limited shelf-life.
- The Use of Inventory Management Systems in Business 3/20/24
the lack of necessary inventory can bring production to a halt or cause lost sales and dissatisfied customers.
- The Use of Inventory Management Systems in Business 3/20/24
In the early 1970s, the modern era of inventory management systems evolved with the development of universal product codes (UPC) and the adoption of UPC as the standard barcode for grocery stores in the United States.
- Inventory Management Systems 3/20/24
re-ordering
point identifies when stock needs to be replenished based on the sales or usage rate and on logistics timelines, also known as lead time.
- Customer Relationship Management (CRM) Systems in Business 3/20/24
Smart
managers understand that it is far less expensive to retain an existing customer than it is to acquire a new customer.
- Customer Relationship Management (CRM) Systems in Business 3/20/24
allowed large firms to track customer purchasing behavior and categorize the customers in order to better segment the market and target high-value customers
- CRM Systems 3/20/24
In
many retail industries, CRM is the most complex and expensive segment of a business management system. It typically includes everything from social media, to call centers, and even integrates supply-chain management.
- CRM System Options 3/20/24
Most of the firms offer their own CRM software; for example, SAP includes embedded CRM modules in its enterprise resource planning software, as do Oracle, Adobe, and Microsoft.
- Decision-Making Process Management Information Systems 3/20/24
Decision-making process management information systems provide managers with tools to

- assist them in using this data to improve decision making
- Business Intelligence Implementation 3/20/24
A common comment from users of BI is “garbage in—garbage out.” This means the output of the BI system is only as good as its inputs.
 - Ethics and Privacy Concerns 3/15/24
There are many times when doing the ethical thing for some may infringe on the privacy rights of others. And there are times when protecting an individual’s privacy in the workplace is not a straightforward matter.
 - What Does Ethics Mean? 3/15/24
Consider how fast information technology is advancing and how slowly the courts work.
 - What Does Ethics Mean? 3/15/24
While laws do not equate to ethics, a study of a society’s legal guidance can frame an ethical study.
 - Encouraging Ethical Behavior in the Workplace 3/15/24
It is important to set ethical computer use standards in the workplace.
 - Encouraging Ethical Behavior in the Workplace 3/15/24
Once appropriate standards have been established, business owners and network administrators must publish the standards, provide employees with appropriate computer usage instruction, monitor employee computer behavior, and periodically review the policies to ensure their continued viability.
 - Computer Ethics Violations 3/15/24
Illegal activity involves using the business’s computers or network in a criminal act such as theft of computer hardware, copyright infringement, software piracy, recording piracy, child pornography, computer scams, bomb threats, and federal computer security violations, such as distributive computer viruses.
 - Computer Ethics Violations 3/15/24
prohibitions against sending personal email, shopping online, visiting social media sites, or playing computer games. Managing policy violations is generally left to the discretion of the manager.
 - Ethical Dimension 1: Information Rights 3/15/24
Data must be used responsibly, and privacy should always be respected. Obtaining informed consent should always be a guiding principle when gathering data.
 - Ethical Dimension 2: Copyrights and Intellectual Property 3/15/24
Patents,

trademarks, and copyrights are a few of the legal devices used to protect intellectual property.

- Ethical Dimension 3: Control and Accountability 3/15/24
Managers can certainly not be expected to hold foreign companies to account, but they can establish controls and standards of accountability within their own organizations.
- Ethical Dimension 4: Establishing Standards 3/15/24
setting standards for the workplace has also been challenging.
- Ethical Dimension 5: Quality of Life 3/15/24
What does a society value more—the right to freedom of expression or the right to not be harmed by others?
- Making Responsible Decisions 3/15/24
By acting unethically, managers give permission for all of their employees to act unethically.
- Laws About Systems Ethics and Privacy 3/15/24
Resolution affirms that the rights held by people offline must also be protected online.
- Laws About Systems Ethics and Privacy 3/15/24
It is very difficult to get nations across the globe to agree on standardized Internet privacy laws.
- U.S. Privacy Laws and Internet Privacy 3/15/24
The First Amendment to the U.S. Constitution protects freedom of speech against all levels of government censorship. First Amendment protection extends to the Internet, which means there is little government filtering of content.
- Major U.S. Policies and Acts Impacting Privacy 3/15/24
It allows law enforcement to obtain information about online and offline communications related to terrorist activities without a warrant.
- Major U.S. Policies and Acts Impacting Privacy 3/15/24
It allows law enforcement to obtain information about online and offline communications related to terrorist activities without a warrant.
- Major U.S. Policies and Acts Impacting Privacy 3/15/24
Children's Internet Protection Act of 2000 (CIPA) addresses children's access to harmful content over the Internet. T

- Major U.S. Policies and Acts Impacting Privacy

Electronic Communications
Privacy Act of 1986 protects email and VoIP communications

3/15/24
- Challenges Facing Internet Privacy: Cookies

A cookie is a small text file of information created by a website you visit. Your web browser stores the cookie on your hard disk. When you revisit a website that uses cookies, your browser will send the cookie to the web server which then uses this information to customize and optimize your experience.

3/15/24
- Intellectual Property

copyright literally means the right to copy but has come to mean that body of exclusive rights granted by law to copyright owners for protection of their work

3/15/24
- Intellectual Property

Intellectual property laws protect against unauthorized software use, sale, or distribution of software, music, movies, video games, and many other digital products.

3/15/24
- Intellectual Property

When the government grants an inventor the right to exclude others from the use of the invention for a period of time, this is called a patent .

3/15/24
- Data, Structured Data, and Big Data

Big data refers to methodologies that attempt to deal with the vast amount of complex information that accumulates at high and accelerating velocity.

3/15/24
- Data, Structured Data, and Big Data

Data are the raw facts that describe the characteristics of an event, object, or set of information.

3/15/24
- Three Methods of Big Data Collection

The primary method of collecting Big Data is to ask individuals directly. Social media sites, online dating services, DNA collection sites, and many others simply ask users for their data. Loyalty cards or apps that track consumer spending with the agreement of the customer, fitness apps that track workouts, and surveys or other similar methods of direct inquiry are commonly used. When you order a product online, have a pizza delivered to your home, or have groceries carried to your car, you have probably already given the vendor permission to collect your purchasing data.

3/15/24
- Protecting Big Data

A major transition in the Big Data security sector is to move all data storage to third-party Cloud storage. Adherents argue that Cloud service providers,

3/15/24

such as Amazon Web Services (AWS), are able to install security measures that far exceed the data security efforts of all but the largest data security firms.

- Protecting Your Privacy 3/15/24
Exercise good password habits.
Incorporate anti-virus protection.
Practice safe browsing and online purchasing.
Monitor your credit report and, if necessary, place restrictions or stops on your credit cards and other forms of credit.
- Protecting Your Privacy: Passwords 3/15/24
A strong password is usually your first line of defense in safeguarding your digital privacy
- Protecting Your Privacy: Antivirus Protection 3/15/24
Antivirus software scans files to identify and remove computer viruses and other malicious programs. Antivirus programs use a variety of techniques to identify and remove viruses and malware. Two of the most common techniques are using signature-based detection and heuristic-based detection.
- The Evolution of E-commerce 3/14/24
1995—eBay is founded and begins to allow e-commerce transactions. Amazon makes its first sale.
- Today's E-commerce Landscape 3/14/24
E-commerce is becoming increasingly less dependent on location. Cross border e-commerce allows organizations to sell internationally by providing information in different languages, multiple currency pricing, and multiple delivery/pickup options.
- E-commerce Ubiquity 3/14/24
ubiquity can help to reduce transaction costs
- E-commerce Ubiquity 3/14/24
This means customers can buy products and services online regardless of the time or location. E-commerce ubiquity
- The Global Reach of E-commerce 3/14/24
E-commerce allows organizations to reach consumers across the globe.
- E-commerce Personalization and Customization 3/14/24
Personalization is the ability of organizations to craft marketing messages and product/service offerings directed toward specific target markets.
- E-commerce Personalization and Customization 3/14/24

Customization is the adjustment of an organization's product or service offerings based on an individual's preferences or past buying behavior.

- User-Generated Content and Social Networking 3/14/24
User-generated content (UGC) is online content that has been created and posted by unpaid contributors such as customers or fans of a product or service. These contributors help to promote a brand or image without any direct influence by an organization. UGC includes posts to websites, blogs, and social media sites.
- Types of E-commerce Transactions 3/14/24
Business-to-business (B2B), business-to-consumer (B2C), and business-to-government (B2G) are three of the most prominent types of e-commerce in the global marketplace. While these may have the greatest impact, there are other types of transactions that also hold importance in the marketplace.
- Business-to-Consumer (B2C) Transactions 3/14/24
Business-to-consumer (B2C) e-commerce is the selling of products and services to individual consumers.
- Business-to-Business (B2B) Transactions 3/14/24
Often these purchases are in large quantities and are directly shipped from one business to another. According to Forrester Research, approximately 12.6 percent of B2B transactions are e-commerce based.
- M-commerce 3/14/24
refers to e-commerce transactions (buying and selling goods and services) that are executed using wireless mobile devices including smartphones and tablet computers.
- M-commerce 3/14/24
49.2 percent of retail e-commerce sales were m-commerce related.
- Mobile Commerce Services 3/14/24
M-commerce financial payment services allow for mobile payment using a smartphone. Services include Apple Pay and Google Pay. Many banks and credit unions also have mobile payment options.
- E-commerce Issues 3/14/24
Due to the online nature of e-commerce transactions data theft and threats to customer data remain a major issue
- E-commerce Issues 3/14/24

ensuring that product listings are accurate, maintaining accordance with online selling laws, and maintaining web accessibility for persons with disabilities.

- E-commerce Issues 3/14/24
It is estimated that it can cost up to five times more to acquire a new customer than it costs to retain an existing customer.
- Cost-Benefit Analysis of E-commerce Presence 3/14/24
Costs include the capital outlay involved as well as the impact on an organization as measured in hiring, management, and time commitments. Benefits are measured in potential return on investment (ROI), potential costs averted, productivity gains, market and brand exposure, and increase in sales.
- Cost-Benefit Analysis of E-commerce Presence 3/14/24
A cost-benefit analysis is a useful tool used to analyze the costs associated with implementing a project or set of activities and the benefits that can be achieved as a result of the implementation. Cost-benefit can be expressed in monetary units as well as in the overall impact on an organization or operating unit.
- Competitive Advantage 11/29/23
maintaining a competitive advantage is vital to a business's survival.
- Competitive Advantage 11/29/23
Competitive advantages are attributes that allow firms to provide goods and services with higher perceived values than those of their competitors
- Porter's Five Forces 11/29/23
existing competitors, new competitors, suppliers, customers, and substitutes
- Using MIS to Measure the Impact of Competition 11/29/23
monopolistic competition allows the vendor to increase its market share and profitability.
- Using MIS to Measure the Impact of Competition 11/29/23
The ability of a firm to enjoy significant profit margins decreases as the number of competitors offering essentially the same products or services increases
- Using MIS to Measure the Threat of a Competitor 11/29/23
Barriers to entry are factors that make it difficult for competitors to enter the market
- Using MIS to Measure the Impact of Supplier Power 11/29/23
. Economies of scale means using large production or purchasing

power to proportionally reduce marginal costs while maintaining, or even increasing, profitability.

- Using MIS to Measure the Impact of Buyer Power 11/29/23
Elasticity of demand refers to how quickly consumer demand changes with a change in price.
- Using MIS to Measure the Impact of the Threat of Product Substitution 11/29/23
The existence of suitable substitutes inhibits the ability of companies to raise prices arbitrarily
- MIS and SWOT Analysis 11/29/23
strengths, weaknesses, opportunities, and threats (SWOT) analysis in their strategic planning. A SWOT analysis attempts to identify an organization's (or an individual's) internal strengths and weaknesses and examines external opportunities and threats
- Porter's Generic Business Strategies 11/29/23
niche market strategies
- Porter's Generic Business Strategies 11/29/23
price leadership or product differentiation
- Christensen's Disruptive Innovation Model 11/29/23
A disruptive innovation uses technology to transform a market or create an entirely new market.
- Lieberman and Montgomery's First-Mover Advantage 11/29/23
the firm's employees will learn from experience how to use technologies and processes to develop the product
- Lieberman and Montgomery's First-Mover Advantage 11/29/23
opportunity to secure important raw materials and to develop necessary logistics lines ahead of any other competitors
- Lieberman and Montgomery's First-Mover Advantage 11/29/23
Switching to a second entrant into the market then necessitates that consumers make other, often costly, adaptations.
- Advantages of a Fast-Follower Strategy 11/29/23
fast-follower strategy makes use of the research and development conducted by the innovator, and typically develops a competing product at a lower price. China and Nigeria have been notably successful in adapting this strategy
- Using MIS Tools for Efficient Inventory Management Systems 11/29/23

For many businesses, particularly in the retail and manufacturing sectors, inventory remains the largest operating expense. Incremental improvements to inventory management can translate to huge overall savings

- JIT Manufacturing and Inventory Management 11/29/23
JIT seeks to minimize excess inventory and keep manufacturing lines agile to save money and to allow for changing customer demands. JIT requires exceptionally smooth supply chains as parts, and often even labor, are not purchased until the moment they are needed in the assembly process
- Methods of Securing Information 2/5/24
cost of cybercrime is estimated to reach \$6 trillion globally in 2021 and currently there is a zero percent unemployment rate in the security field
- Methods of Securing Information 2/5/24
No system can be completely safe all the time, but companies must use all the resources at their disposal to protect their systems and data and to mitigate the risks associated with cyberattack
- Cybercrime, Cyberattacks, and Cyberwarfare 2/5/24
Cyberwarfare refers to cyberattacks that come from a foreign government.
- Cybercrime, Cyberattacks, and Cyberwarfare 2/5/24
Cybercrime refers to any crime involving a computer
- What Is Meant by Cybercrime 2/5/24
Single event cybercrimes occur when victims endure a single event such as unknowingly downloading a Trojan horse virus, installing a keystroke logger, responding to a phishing request, experiencing theft or manipulation of data, or falling victim to identity theft and/or e-commerce fraud.
- What Is Meant by Cybercrime 2/5/24
Ongoing series of event cybercrimes are more serious than single event cybercrimes. Ongoing series of events include cyberstalking, child predation, extortion, blackmail, and terrorist activities.
- What Is Meant by a Cyberattack 2/5/24
The first type of attack aims to disable a target computer or prevent it from accessing a network or the Internet. The second type of attack is designed to gain access to data stored on a device or to gain administrative privileges to a device
- State-Sponsored Cyberwarfare 2/5/24
intelligence agencies from the United States

and Israel launched the Stuxnet worm on the Natanz nuclear facility in Iran. This attack damaged more than 1,000 centrifuges and caused significant delays and interruptions of the Iranian nuclear program.

- Protection from Hackers and Natural Disasters 2/5/24
natural disasters put computers at risk,
- Protection from Hackers and Natural Disasters 2/5/24
hackers, use their skills to help businesses, but others have criminal intent.
- Protecting Computer Systems and Data from Natural Disasters 2/5/24
Geographic
data redundancy is the replication and storage of data in separate locations
- Protecting Computer Systems and Data from Natural Disasters 2/5/24
A business continuity plan
- White Hat Hackers 2/5/24
White hat hackers are nonmalicious computer security experts who test the security measures of an organization's information systems to ensure they are protected against malicious intrusions.
- How White Hat Hackers Work 2/5/24
White hat hackers use the same techniques and tools that are used by illegitimate hackers. These tools include rootkits, social engineering, spoofing, and back door programs.
- Black Hat Hackers 2/5/24
Black hat hackers break into computer systems with the intent of causing damage or stealing data.
- Malware 2/5/24
Malware is short for malicious software and is designed to steal information, destroy data, impact the operations of a computer or network,
- Computer Viruses 2/5/24
ou may also have heard that Mac computers are not susceptible to computer virus attack. According to many cybersecurity experts, this is a myth
- Computer Viruses 2/5/24
Y ou may also have heard that Mac computers are not susceptible to computer virus attack. According to many cybersecurity experts, this is a myth .
- Computer Viruses 2/5/24
A computer
virus is software that infects computers and is created using computer code. Computer viruses typically must be run to attack and do damage. Viruses can destroy programs or alter the operations of a computer or network
- How Devices Get Infected with Viruses 2/5/24

A computer virus works in much the same way as a biological virus that infects people. A biological virus is spread from host to host, and the virus has the ability to replicate itself.

- How Devices Get Infected with Viruses 2/5/24

First, the virus arrives via email attachment, file download, or by visiting a website that has been infected. An action such as running or opening a file activates the virus. Once activated, the virus copies itself into files and other locations on your computer. Next, the infection spreads to other computers via infected email, files, or contact with infected websites. Finally, the payload, or the component of a virus that executes the malicious activity, hits the computer and other infected devices.
- Ransomware 2/5/24

Ransomware typically encrypts the victim's data files. A message offers to decrypt the files if the victim makes a ransom payment to the perpetrator.
- Ransomware 2/5/24

Phishing is commonly executed through email messages. Illegitimate file attachments are included in what appears to be a legitimate email message.
- Keystroke Loggers 2/5/24

A keystroke logger is a form of spyware that records all actions typed on a keyboard
- DoS Attacks 2/5/24

A DoS attack is designed to interrupt or stop network traffic by flooding it with too many requests.
- Phishing 2/5/24

Phishing is the illegitimate use of an email message that appears to be from an established organization such as a bank, financial institution, or insurance company. In order to appear legitimate, the message often contains the company's logo and identifying information. Phishing uses legitimate looking email messages to con a user into giving up private information such as account numbers, Social Security numbers, and personal information
- Social Engineering 2/5/24

One popular social engineering attack takes place when an impostor poses as an organization's IT person. The IT impostor contacts an individual within an organization via email or the phone and attempts to get the individual to divulge sensitive information such as a username and password.
- Social Engineering 2/5/24

Social engineering is popular because it is often easier to exploit an individual's trusting nature than it is to hack a system or develop malicious software

- Firewalls 2/5/24

A firewall is hardware or software used to keep a computer secure from outside threats such as hackers and viruses. Firewalls allow or block Internet traffic in and out of a network or computer.
- How MIS Uses Using Backups to Protect Data 2/5/24

Data backup is critical because, in the event of primary data failure due to hardware or software failure, malware attack, natural disaster, or human error, data can be restored from an earlier point in time,
- Business Computer Applications 2/5/24

This module describes the various applications that are used to assist managers in all aspects of running a business, including transaction processing, decision support systems, executive information systems, marketing management, human resources, enterprise resource planning, supply chain management, and customer relationship management
- How Businesses Use Specific Applications 2/5/24

business applications make it possible to accept mobile payment methods such as Apple Pay and Google Wallet using contactless, near-field communications (NFC) technology. For many consumers, cash has become virtually obsolete.
- Transaction Processing Systems 2/5/24

transaction processing systems allow methods of exchanging money for goods and services to operate more efficiently.
- Cash Registers 2/5/24

grocery store POS terminals typically include scales for weighing produce, QR code and barcode scanners, cameras, and thermal printers.
- Cash Registers 2/5/24

At the end of the work-shift, the shopkeeper would verify that the amount of cash in the till matched the total shown by the register itself, deterring theft by cashiers.
- PayPal 2/5/24

PayPal that allowed Nokia Palm Pilot owners to send money to each other through its short-range infrared ports. In 2000, X.com merged with Confinity under the name X.com and developed software that would allow payment transfers over the Internet.
- Square 2/5/24

The resulting company, called Square , began as a card reader and iPhone app and soon joined with Apple to create the Square Stand. large image navigator opens in a modal

Maskot/Getty Images

The Square Stand combines an iPad, a cash drawer, a thermal printer, and a chip/swipe/contactless reader, to form an inexpensive point of sale terminal.

- QuickBooks 2/5/24
dominant financial services software for small businesses in the United States.

- Decision Support Systems Software 2/5/24
DSSs provide decision makers with the information necessary to solve problems in complex and rapidly changing environments.

- Executive Information System Software 2/5/24

executive support system (ESS), is a version of decision support system (DSS), or business intelligence (BI), software designed to expressly meet the needs of senior corporate executives of larger companies or corporations.

- Elements of Executive Information System Software 2/5/24
an EIS interface allows the executive to drill down into areas of concern.

- Elements of Executive Information System Software 2/5/24
The key element of any EIS is a highly intuitive user interface , often referred to as the dashboard . This interface provides the executive with the ability to quickly scan the organization and note any discrepancies from anticipated norms

- Major Categories of Executive Information System Software 2/5/24
Operations management focuses primarily on organizational processes and manufacturing. Financial management addresses budgeting, revenue, expenses, asset management, debt, credit, and investments, as well as tax minimization and other financial matters. Marketing management focuses on sales, promotions, and customer relationship management (CRM). Human resources management (HRM) and supply chain management (SCM) system software allow executives to address a firm's personnel requirements, logistics, and inventory needs.

- Executive Human Resources Systems Software 2/5/24
personnel requirements forecasting, recruiting, selection, hiring, evaluation, training, retention (re-assignment, promotion, and grievance management), scheduling, and compensation (payroll and benefits administration).

- Customer Relationship Management 3/20/24

acquiring and keeping customers is such an important part of running a successful business. Customer relationship management systems have been developed to assist businesses in all aspects of dealing with customers.

- Importance of Customer Relationship Management Systems 3/20/24
CRM software allows organizations to better identify and attract prospective customers, maintain customer engagement and relationships, provide wanted or needed services, and ultimately increase sales.
- How Businesses Use CRM Systems to Acquire New Customers 3/20/24
Customers can be acquired using a number of approaches including social media, search, affiliate, referral, and email marketing
- How CRM Systems Assist Businesses in Segmenting a Market 3/20/24
Segmented groups share common traits, interest, needs, wants, and geographic location.
- Targeting a Market Segment 3/20/24
A target market is the group of existing and potential customers that an organization believes they can sell their products or services to.
- Targeting a Market Segment 3/20/24
CRM software can identify where customers are located, what they buy, how often they buy, and even the purpose of the purchase. Often this data is used to create an ideal customer profile that identifies the highest revenue customers.
- Identifying Current Customers 3/20/24
A well-developed CRM strategy can assist organizations to identify the needs, wants, preferences, and expectations of current customers. I
- Understanding How Customers Interact 3/20/24
Customer interaction encompasses all the communication that takes place between a customer and an organization.
- Acquiring Customer Information 3/20/24
Each time an interaction occurs, whether it is a communication or a purchase, CRM software records this information.
- Share of Customer 3/20/24
businesses should try to capture more business from their existing customers. This often leads to higher gross margins and more profit.
- Ethical Considerations of Selling Data to Third Parties 3/20/24
While this information is legitimately collected, many organizations go on to sell this data to third parties

who often use it for marketing and demographic analysis.

- The Decisional Roles of Managers 11/29/23
managers are the central location for information
- The Decisional Roles of Managers 11/29/23
They represent their business to stakeholders
- The Decisional Roles of Managers 11/29/23
work with employees
- High-Velocity Automated Decision Making 11/29/23
In the last 2 years, 90% of the world's data has been created.
- High-Velocity Automated Decision Making 11/29/23
High-velocity decision making results from the need to process data and make decisions quickly. High-velocity decision making is executed by computers through algorithms and software that can process data.
- Management Filters 11/29/23
mistakes and poor decisions still occur. They happen because humans (including managers) process (filter) information through their own personal filters
- Management Filters 11/29/23
managers, for the most part, are not very good at assessing risk and most are risk averse.
- Structured Decisions 11/29/23
Structured decisions involve tasks and choices that are routine and encompass prescribed and definite procedures
- Structured Decisions 11/29/23
operational decisions
- Unstructured Decisions 11/29/23
strategic goal development.
- The Balanced Scorecard Method 11/29/23
KPIs are quantifiable values that validate how effectively an organization is accomplishing significant business objectives
- How Information Quality Impacts Business Decisions 11/29/23
quality of information including accuracy, completeness, relevance, validity, timeliness, and consistency.

- A Simple Decision Matrix: How Problems Are Discovered

5 Whys can help to identify the underlying cause of a problem

11/29/23
- A Simple Decision Matrix: How Problems Are Discovered

Identify the current problem—In order to identify the current problem, it is necessary to provide a complete description of the problem.

Ask why the problem happened—In this step, it is important to ask why the problem occurred.

Continue to ask why—If the root cause of the problem is not clearly identified, continued to ask why questions.

Consult with members of the organization—Once the why questions have been asked and information documented, it is important to consult with members of the organization to come up with an agreed-upon root cause of the problem.

Deciding and Preparing for Consequences —Once the root cause has been mutually agreed upon, the discussion shifts to establishing solutions for the problem.

11/29/23
- How Solutions Are Designed

Identify what you know and don't know.

11/29/23
- The Decision-Making Process

Herbert Simon created a four-stage approach to decision making. These stages include intelligence, design, choice, and implementation

11/29/23
- Project Management Software

In business, however, a project can be much more extensive. One part of the project may not be able to be started until another is completed. Input and supplies may require outside sources. A budget must be developed. Unforeseen circumstances almost always arise.

3/20/24
- What Is Project Management?

projects should meet the S.M.A.R.T. criteria; that is, the project must have a specific objective (S), progress must be measurable (M), it must be attainable (A) and realistic (R), and there must be a defined time-frame (T).

3/20/24
- The Four Stages of Project Management

initiation, planning, execution, and closure.

3/20/24
- Stage 1: Initiation Phase

requirements of the project, documents these requirements, and analyzes the costs of the project.

3/20/24
- Stage 1: Initiation Phase

projected timeline for deliverables

3/20/24

are described. Stakeholders in the project are identified

■ Stage 2: Planning Phase 3/20/24

Gantt chart makes it easier to develop budget and funding timelines because it shows when each task of the project should be started and finished. The Gantt chart visually depicts when supplies, labor, permits, and other resources need to be obtained.

■ Stage 3: Execution Phase 3/20/24

experienced managers understand that they must allow for contingencies with every project, and that communicating any issues quickly can serve to minimize their potential impact.

■ What Project Management Software Provides 3/20/24

project management (PM) software provides two functions: project scheduling and project communications

■ How Project Managers Use Flowcharts 3/20/24

flowchart assists in alerting project management stakeholders when such points are approaching and what preparations must be accomplished prior to each of these checkpoints.

■ Creating a Flowchart 3/20/24

simple flowchart can also serve as a building block to more sophisticated program management tools and help all stakeholders better understand the project goals and the intermediate steps required to complete the project

■ Major Elements of a Flowchart 3/20/24

On the flowchart, a process is depicted by a rectangle. Most projects involve many processes, so the rectangle is the most common shape on most flowcharts.

■ Major Elements of a Flowchart 3/20/24

The project's beginning point and ending point are represented by ovals.

■ Major Elements of a Flowchart 3/20/24

Diamonds represent decision points and typically hold questions

■ Major Elements of a Flowchart 3/20/24

Arrows describe the directional progress of the flowchart, or the flow itself.

■ Gantt Charts 3/20/24

Gantt chart, a project is broken down into its component parts. Some tasks can be done concurrently while other tasks are dependent upon the completion of preceding tasks. Each task is

then depicted on the chart, going down the Y-axis, displaying an estimate of its time requirement on the X-axis.

- How Gantt Charts Add Value 3/20/24
The Gantt chart shows an estimated beginning point for each process as well as an estimate of the process duration.
- PERT Charts 3/20/24
program evaluation and review technique (PERT) network chart enables project managers to visualize the relationships between numerous interdependent activities and to determine which activities will establish the actual timeline for complex project completion
- Multiple Dependency Relationships 3/20/24
Both Gantt charts and PERT network charts account for dependencies among project activities.
- The Critical Path Method 3/20/24
critical path for project completion based on those activities that will take the longest to complete.
- Dealing with Unknowns 3/20/24
Because every project is unique and an individual project manager has a limited data pool to work with, conducting an accurate risk analysis remains challenging.
- The Monte Carlo Simulation 3/20/24
When the calculations became too complex even for this brilliant mathematician, he decided to simply play solitaire hundreds of times to estimate the probability of winning in one attempt
- Enterprise Resource Planning 3/20/24
Enterprise system software is a multibillion-dollar industry that produces components supporting a variety of business functions. ERP systems can collect, store, manage, and interpret data all in one place
- Enterprise Resource Planning 3/20/24
. ERP is used to manage all these activities by linking them together and creating a way to exchange data between all the areas of an organization.
- Enterprise Resource Planning 3/20/24
You also need to track and order inventory, maintain inventory at numerous sites, deal with suppliers, delivery companies, and more. Overseeing the manufacture of your own brand of items is another major part of the picture. You must also keep track of sales, sustain and expand customer relationships, oversee the maintenance of physical locations and warehouses,

- What Is an Enterprise Resource Planning (ERP) System?

ERP systems provide an integration hub that links members of an organization and connects processes and various technologies across an organization.

3/20/24
- What Is an Enterprise Resource Planning (ERP) System?

ERP systems are planned and implemented using a single data schema that is linked to a shared organizational database.

3/20/24
- The Use of ERP Modules in Business

ERP systems are designed to integrate enterprise software modules from a variety of operational and process areas of an organization including finance, accounting, human resources, customer relationship management, transaction processing, and project management.

3/20/24
- Using ERP Systems to Increase Efficiency and Business Value

ERP systems are used to consolidate this data in a central location for access and retrieval, which cuts down on data redundancy and access time.

3/20/24
- The Drawbacks of Using ERP Software

The overall cost of ERP software can be prohibitive for some organizations

3/20/24
- Why Most ERP Systems Are Cloud-Based

Cloud-based ERP allows organizations to access data and reports from remote locations at any hour of the day. They often have a lower price point when compared to on-premise options.

3/20/24
- How Financial Systems Software Interacts with ERP

ERP systems can be integrated with financial management systems to provide centralized access and management of financial data.

3/20/24
- How Accounting Systems Software Interacts with ERP

accounting systems are commonly being integrated with ERP systems.

3/20/24
- How CAD and Manufacturing Software Interacts with ERP

ERP software takes data from CAD files and decodes the design and manufacture specifications into usable information for use throughout the manufacturing process.

3/20/24
- How Transaction Processing System Software Interacts with ERP

Integration of TPS with ERP has many advantages

3/20/24
- How Transaction Processing System Software Interacts with ERP

Reduces human error

3/20/24

- How Customer Relationship System Software Interacts with ERP

Businesses that utilize integrated CRM and ERP systems mitigate the probability of the aforementioned issues by employing a shared database that results in automatic updates and instantaneous data visibility. Outcomes of an integrated approach include better visibility of customer relationships, faster billing, and single source reporting via user customized dashboards.

3/20/24
- Time Value of Money

an item that costs \$10 today will be worth a lot more in ten or twenty years.

11/30/23
- The Time Value of Money

hurdle rate is the minimum rate of return on a project

11/30/23
- The Time Value of Money

internal rate of return (IRR) on a project must exceed the cost of capital to add shareholder value and generate positive net present value (NPV).

11/30/23
- How Net Present Value (NPV) Relates to the Time Value of Money

Net present value (NPV) is the difference between the present value of cash inflows and the present value of cash outflows over a period of time.
NPV is used in capital budgeting and investment planning to analyze the profitability of a projected investment or project

11/30/23
- Future Value

Future value (FV) is the value of an asset at a specific date

11/30/23
- Future Value Future Single Sum with Monthly Compounding

When you calculate future value you need to include the amount of compounding periods. Monthly compounding assumes interest will be paid 12 times per year.

11/30/23
- Present Value

Present value (PV), sometimes also referred to as discounted value, measures the worth of a future amount of money or stream of payments in today's dollars adjusted for interest and inflation

11/30/23
- Ordinary Annuity

An annuity is a contract between an individual and a company in which you make a lump sum payment or series of payments and, in return, receive regular disbursements beginning either immediately or, more commonly, at some point in the future

11/30/23
- Computer Hardware

hardware, which is any part of the device that can be touched,

2/5/24
- What Is a Computer?

Laptops
Desktops
All-in-Ones
Tablets

2/5/24

Smartphones
Mainframes
Servers
Gaming consoles
Embedded devices

- What Is a Computer? 2/5/24
A server is a computer system in a network that is shared by multiple users
- What Is a Computer? 2/5/24
motherboard, which is the circuit board that holds the computer's main microprocessor. This microprocessor is called the central processing unit.
- What Is a Computer? 2/5/24
A computer is a digital device that completes four basic functions.
- What Is a Computer? 2/5/24
An embedded computer is a digital device that accepts input, processes data into information, provides output, and can store data—but it is part of a larger device or system
- What Is a Computer? 2/5/24
Some tablet computers have a smaller operating system (OS) than laptop computers
- What Is a Computer? 2/5/24
Three common types of servers are network, web, and file servers.
- Computer Components 2/5/24
A multicore processor has two or more cores that are responsible for processing
- Computer Components 2/5/24
Intel Corporation —Founded in 1968, Intel is the world's largest manufacturer of processors.
- Computer Components 2/5/24
AMD —Founded in 1969
- Computer Components 2/5/24
Clock speed is measured in the number of machine cycles the processor can run per second.
- Computer Components 2/5/24
A processor or central processing unit (CPU) is the brain of the computer where most calculations take place
- Computer Components 2/5/24
NVIDIA —Founded in 1993
- Computer Components 2/5/24
Computer memory, also referred to as RAM ,
- Computer Components 2/5/24
Memory composed of solid-state electronics is fast and energy efficient because there are no mechanical moving parts.
Memory is sometimes referred to as volatile because its data are lost upon computer shut

down.

- Computer Components 2/5/24
The amount of RAM directly impacts processing speed.
- Computer Components 2/5/24
Capacity is usually measured in gigabytes (billions of bytes) and terabytes (trillions of bytes).
- Computer Components 2/5/24
. External storage devices reside outside the computer.
Examples of external storage devices include external hard drives and USB or thumb drives.
Optical drives, such as a laptop's DVD drive, and memory cards, such as a microSD card for a phone, are usually considered external storage.
- Computer Components 2/5/24
Digital devices need to store some information indefinitely.
Storage devices allow for the storage of data and information that can be retrieved for future use.
Data remain intact when the computer is turned off.
- Computer Components 2/5/24
A hard drive uses fixed disk platters to store data and information
- Computer Components 2/5/24
SSDs have no moving parts, which makes them faster and more durable than hard drives.
SSDs tend to be more expensive than traditional hard drives.
- Connections 2/5/24
USB allows for data transfer between devices and for devices to be electrically charged. USB drives are sometimes referred to as thumb drives, flash drives, or jump drives.
- Connections 2/5/24
A port is a slot or hole that matches the cord or expansion card
- Wireless Connections 2/5/24
A protocol is a set of rules for communication between devices that determines how data is transmitted and received
- How a Computer Works 2/5/24
Computers communicate using their own language. This language is called binary. Binary language consists of two digits: 0 and 1. Each 0 or 1 is called a binary digit , or a bit (b). Bits are the smallest unit of data a computer can process.
- How a Computer Works 2/5/24
Eight bits grouped together are called a byte . Each number, special character, and letter of the alphabet is represented by a unique combination of bits.
- How a Computer Works 2/5/24
Kilobyte (KB) –About 1 thousand bytes—1 KB is equal to about one page of text.
Megabyte (MB) –About 1 million bytes—1 MB is equal to about 875 pages of text.
Gigabyte (GB) –About 1 billion bytes—1 GB is equal to 341 digital images (3 MB average file

size).

Terabyte (TB) –About 1 trillion bytes—1 TB is equal to about 349,000 digital images (3 MB average file size) or 40 single-sided Blu-ray discs.

Petabyte (PB) –Equals 1,000 terabytes—1 PB is equal to about 358,000,000 digital images (3 MB average file size) or about 42,000 single-sided Blu-ray discs.

■ Computer Software and Buying a Computer 2/5/24

Software is the broad term that encompasses every instruction a computer processes,

■ System Software 2/5/24

The operating system is the most important software on your computer. It provides the instructions necessary to run the central processing unit.

■ System Software 2/5/24

The OS controls the functions of a computer and determines which applications can be used on a device. Windows, iOS, Android, and Linux are all OSs.

■ System Software 2/5/24

Windows personal computers are by far the most popular in the world

■ System Software 2/5/24

The advantages of a Windows system include the large amount of available software and its price. It is more affordable than other systems because of competition.

■ System Software 2/5/24

Apple has always emphasized style in its products, and they are considered easy to use.

■ System Software 2/5/24

it is the most popular smartphone OS outside the United States

■ System Software 2/5/24

Open-source software, such as the Linux OS, is software that is available for use free of charge and can be modified from its original design.

■ System Software 2/5/24

The Linux operating system (OS) is free, open-source software that anyone can use and modify. Most servers, mainframes, and supercomputers use the Linux OS. It also runs most video game consoles and embedded computers, and is the underlying software for the Android OS.

■ Application Software 2/5/24

Traditional productivity applications (apps) include Microsoft Office

■ Software Licenses 2/5/24

Network license: Network licenses give anyone on a network the right to use the software.

■ Software Licenses 2/5/24

Site license: Site licenses are different from network licenses because the software is installed on the device of qualified users who request the software inside an organization

■ Software Licenses 2/5/24

A software license is a legal document that governs the use or redistribution of software . In the United States under copyright law all registered software is copyright protected

■ Software Licenses 2/5/24

Single-user license: A single-user license restricts the use of the software to one user at a time.

■ Preparing Your Computer for Maximum Efficiency 2/5/24

Uninstalling means removing software from a computer.

■ Preparing Your Computer for Maximum Efficiency 2/5/24

It refers to putting software on a digital device