Biyani's Think Tank

Concept based notes

E-Commerce

(BBA Part-III)

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Preface

I am glad to present this book, especially designed to serve the needs of the students. The book has been written keeping in mind the general weakness in understanding the fundamental concepts of the topics. The book is self-explanatory and adopts the "Teach Yourself" style. It is based on question-answer pattern. The language of book is quite easy and understandable based on scientific approach.

Any further improvement in the contents of the book by making corrections, omission and inclusion is keen to be achieved based on suggestions from the readers for which the author shall be obliged.

I acknowledge special thanks to Mr. Rajeev Biyani, *Chairman* & Dr. Sanjay Biyani, *Director* (*Acad.*) Biyani Group of Colleges, who are the backbones and main concept provider and also have been constant source of motivation throughout this Endeavour. They played an active role in coordinating the various stages of this Endeavour and spearheaded the publishing work.

I look forward to receiving valuable suggestions from professors of various educational institutions, other faculty members and students for improvement of the quality of the book. The reader may feel free to send in their comments and suggestions to the under mentioned address.

Author

Syllabus

B.B.A. Part-III

E-Commerce

Unit – I

Meaning, Characteristics, Origin, Process, Key Drivers of E-Commerce, Elements, Traditional Commerce vs E-Commerce, Benefits, Standards, Technologies, E-Commerce Models, Mobile Commerce, Barriers to E-Commerce.

Unit – II

Internet and E-Commerce, networking LAN, WAN, Business Uses of Internet, www, Protocols, Intranet and Internet, Multimedia Application, Hardware and Software.

Unit - III

Electronic Payment System – Methods, Security Issues, Electronic Banking, Electronic Stock Trading.

Unit - IV

Data Warehousing, Client-Server Computing, Data mining, Website Management – Steps.

Unit – V

ERP – Meaning, Functions, SAP Applications, Business Intelligences, Ethics, Security and E-governance.

Content

S.No. Name of Topic

Chapter-1

Introduction of E-Commerce

Q1. What is E-commerce? Define Objective of E-commerce?

Ans. The term commerce is define as trading of good & services or if _e' for _electronic' is added to this, the definition of e – commerce is defined as trading of goods, services, information or anything else of value between two entities over the internet.

Following are some definitions of e – commerce:-

1. It is the ability to conduct business electronically over theinternet.
2. It means managing transactions using networking and electronicmeans.
3. It is a platform for selling products & services via internet.

Q2. What are the objectives of E-commerce?

Ans: **Objective of e-commerce-** E-commerce is the environment in which information for the buying and selling of goods and services moveselectronically.

There are some objectives-

1. Improved productivity
2. Cost saving
3. Streamlined Business Process
4. Better Customer Service
5. Opportunities for new Business.

Q3. **What are the Characteristics of e – commerce?**

Ans. 1. Establishment of B to B relationship.
2. Electronic payment.
3.e – distribution of products & services.
4. Exchange of information.
5. Pre and post – sales support

Q 4. What are advantages of e– commerce?

Ans. Advantage of e – commerce:-

1. **Facilitates the globalization of business:-**e – commerce facilitates the globalization of business by providing some economical access to distant markets and by supporting new opportunities for firms to increase economies by distributing their products internationally.

2. **Provides increased purchasing opportunities for the buyer:-**As e – commerce increases sales opportunities for the seller, it also increases purchasing opportunities for buyer.

3. **Lowering staffing cost:-** As in e – commerce, the selling & purchasing process is outline, the amount of interaction with staff is minimized

4. **Market based expansion:-** An e – commerce is open to entirely new group of users, which include employees, customers, suppliers & business partners.
5. **Increased profits:-**With e – commerce, companies reach more & more customers where physical commerce cannot reach, thus increasing profits.

6. **Increased customer service & loyalty:-** e – commerce enables a company to be open for business wherever a customer needs it.

7. **Increase speed & accuracy:-** E – commerce see the speed and accuracy with which business can exchange information, which reduces cost on both sides of transactions. It is available 24 hours a day & 7 days a week.

8. **Increased response times**:- In e – commerce, the interaction with the system take place in real time & therefore allows customer or bidder torespond more Quickly & thus reduces the time of discussion betweenthen as in traditional commerce.

Q 5. What are the limitations of e-commerce?

Ans. Limitations of e – commerce:-

1. **Security:-** the security risk in e – commerce can be-client / server risk

   data transfer and transaction riskvirus risk

2. **Legal issues:-** these issues arises when the customer data is fall inthe hands of strangers.

3. **Lack of skilled personnel:-** there is difficulty in finding skilled www developers and knowledgeable professionals to manage and a maintain customer on line.

4. **Loss of contact with customers:-**Sometimes customers feels thatthey does not have received sufficient personal attention.

5. **Uncertainty and lack of information**:- most of the companies hasnever used any electronic means of communication with its customers as the internet is an unknown mode for them.

6. **Some business process may never be available to e – commerce:-** Some items such as foods, high cost items such as jewelry may be impossible to be available on the internet.

Q 6. What is the Forces driving Ecommerce?

Ans. The Driving Forces for E-Commerce as follows-

Market and Economic Pressures

1. **Strong competition**: Now competitions the part of any business and companies are implementing new techniques every day to bear

   their competitors. E-Commerce is one of the tools of recent days,which is adopted by the companies.

2. **Global Economy**: In Present Scenario world becomes a global village and there are standard patters in market for business, so every country must follow these norms. There is huge gap betweenthe growth rate of developed and developing nation, so more and more developed nations are investing in every part of world. E- Commerce is the need of such a scenario.

3. **Extremely Low Labor Cost in Some Countries**: Now this the common feature of business that companies are having manufacturing units in one are of the world and the same products is marketed in other part of the world. Definitely some medium is required to maintain it and e commerce is providing such medium.

4. **Frequent Changes in Market demands**: As we discussed above that the age of technology so any change which takes place in partof the world, rapidly reflects every where so e-commerce it the tool which is necessary to sustain in present fast changing world.

5. **Increase Expectation of Consumers**: The expectation of consumers about quality and services are very high, so it works like driving force for e-commerce.

6. **Awareness Among Consumers**: Awareness Among Consumers: Now consumers are well aware. Internet, print media and electronic media keep update the consumers about new products and their rates.

Societal And Environmental Pressures

1. **Government Regulations**: Every country have its own rules and regulations but now a days almost every country have well defined cyber laws which provides a right environment for the e commerce.

2. **Reductions in Government subsidies**: Now world is very open, some countries provides lot of rebate in tax and in other forms to do

   business. But some other countries reducing the soaps for business.E-commerce provides the opportunity to take these challenges.

3. **Rapid Political Changes**: Whenever government changes n any country there are some changes in guidelines and polices towards the business. It is also work as driving force for the e-commerce.

Technological Pressures

Rapid Technological Changes: Technology is the factor, which provides e-commerce an opportunity to become and perfect solution for business.

New Technologies: New and secure technology available in the market, which provides an easy, cheap and secure platform for the e- commerce.

Information Overload: By using e-commerce we can easily efficiently manage information about the product and other business related things. This is a cheap and secure medium for managing important information.

Digital Convergence: The digital revolution has made it possible for digital devices to communicate with one another. The Internet's massive growth during the past decades- a creation of market forces- will continue. Steady increase in computer power and decreasing cost made navigation on the internet.

Q 6 What is the difference between traditional commerce and e –commerce?

Ans

	Traditional Commerce	E- Commerce
1	Customer can easily identify & authenticate a merchant by seeing directly to him.	It is not easy in this case.
2	Customers can directly talk to merchant. Communication hands of a third party	Customer can only see the representation & can only is not in the see the WebPages
3	Customers can interact with other Customers and gain feedback about merchant from other customers	Customer cannot interact with other customers
4	It is not available all the time	It is always available 24* 7*365 hours.
5	It is slow method	It is fast method
6	Customers just give cash to Merchant & there is no need to give their name or address So there is no worry about Personal information	Customer have to give their personal information to Purchase the product.

Q 7 What is the opportunities in e-commerce for industries?Ans.

There are many opportunities for e-commerce as-

1. **Financial services-**A large number of users use the internet for some form of financial guidance.

2. **Stock trading-**Online stock trading is nowadays one of the most demanding e-commerce utilities. The ability to offer market access ata competitive price is a key advantage of online stock broking companies and this is slowly

happening in India too.

3. **Banking -** Internet banking is now growing. Many banks like ICICIand HDFC are making inroads into this area.

4. **Legal and Professional services-** opportunities also exist for Indian companies in legal and other professional services. In terms of opportunities for Indian legal service providers, the requirement for professional, legal and regulatory advice is expected to increase as the number of e-commerce user's increases.

5. **Tour and Travel**- The travel industry has readily adapted to e-commerce. There has been a growing emphasis on the search for alternative distribution channels within the sector, particularly with the railways and the airlines, as they seek to reduce costs. These sectors have adapted well because of their online reservation systems.

Chapter-2
Technology and E-commerce

Q1. What is Internet?
Ans: The internet, also sometimes referred to as "the net," is a vast global network of interconnected computer networks that use a common set of communication protocols known as the Internet Protocol Suite (TCP/IP). This allows all devices connected to the internet to communicate with each other, regardless of their location or the specific network they are connected to.

Q2. What are the technologies of e-commerce?
Ans: Electronic commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems.

Q3. Define Networking.
Ans: Networking refers to interconnected computing devices that can exchange data and share resources with each other. These networked devices use a system of rules, called communications protocols, to transmit information over physical or wireless technologies.

OR

A computer network is a set of computers sharing resources located on or provided by network nodes. Computers use common communication protocols over digital interconnections to communicate with each other.

Q4. Explain LAN and WAN.
Ans: Both LAN and WAN are types of networks, but they differ in their size, scope, and purpose.
LAN (Local Area Network):

Size: Covers a small physical area, typically within a single building or campus.
Devices: Connects a limited number of devices, like computers, printers, and servers.
Technology: Uses dedicated cables (Ethernet) or wireless connections (Wi-Fi) for high-speed, reliable data transfer.
Purpose: Facilitates resource sharing (printers, files) and communication within a localized group.
Benefits: Offers high speeds, low latency (delay), and strong security due to its contained nature.
Example: Your home network connecting your computer, smartphone, and printer.

WAN (Wide Area Network):

Size: Spans across a broad geographical area, connecting devices over cities, states, or even countries.
Devices: Can connect a large number of devices, geographically dispersed across multiple LANs.
Technology: Utilizes various technologies like leased lines, satellite connections, and VPNs

to bridge long distances.
Purpose: Enables communication and data exchange between geographically distant locations.
Benefits: Connects geographically dispersed offices, allows remote access to resources, and facilitates global communication.
Example: The network connecting all the branches of a bank across different cities.

Q5. State business uses of Internet in E-Commerce.
Ans: The internet has revolutionized the way businesses operate, opening up a vast array of possibilities for growth, communication, and innovation. Here are some key business uses of the internet:

Marketing and Sales:

Website and ecommerce: Create an online presence to showcase products and services, reach a wider audience, and facilitate online sales.
Search engine optimization (SEO): Improve website ranking in search results to attract organic traffic.
Social media marketing: Engage with customers, build brand awareness, and promote products/services on social media platforms.
Email marketing: Stay connected with customers, share updates, and run targeted marketing campaigns.
Online advertising: Use paid advertising platforms to reach specific demographics and interests.

Communication and collaboration:

Email: Communicate with employees, partners, and customers efficiently.
Video conferencing: Conduct meetings and collaborate with remote teams in real-time.
Project management tools: Manage projects collaboratively, track progress, and share documents.
Internal communication platforms: Build company culture, share information, and facilitate engagement among employees.

Operations and Management:

Customer service: Provide online support, answer questions, and manage customer inquiries.
Supply chain management: Track inventory, optimize logistics, and collaborate with suppliers.
Accounting and finance: Manage finances, automate tasks, and access financial data online.
Human resources: Recruit talent, manage employee information, and automate HR processes.
Data analysis and reporting: Gain insights from customer data, website traffic, and other sources to inform decision-making.

Innovation and Growth:

Remote work: Enable employees to work from anywhere, attracting talent and reducing overhead costs.
Market research: Conduct online research, gather customer feedback, and analyze market trends.
New business models: Explore innovative online business models, like subscription services or on-demand platforms.

Partnerships and collaboration: Connect with other businesses and professionals online to create new opportunities.

Additional benefits:

Cost-effectiveness: Online tools and resources can be more affordable than traditional methods.
Global reach: Access customers and partners worldwide, regardless of location.
24/7 availability: Websites and services are accessible anytime, anywhere.
Improved efficiency: Automate tasks, streamline processes, and access information easily.

Q6. Explain www and its protocols.
Ans: The World Wide Web (WWW), commonly referred to as "the web" is a global system of interconnected documents and other resources accessed through the internet. It allows users to access information, interact with services, and communicate with others across the globe.

To function effectively, the web relies on specific protocols, which are like communication rules and standards that allow devices to understand each other and exchange information smoothly. Here are some key protocols that power the web:

1. Hypertext Transfer Protocol (HTTP): This is the fundamental protocol for data transfer on the web. It defines how web browsers request and receive web pages and other resources from web servers. HTTP uses a client-server model, where the browser acts as the client and the web server acts as the server.

2. Uniform Resource Identifier (URI): It acts as the "address" of a web resource, uniquely identifying it on the web. URIs include familiar components like URLs (web page addresses), email addresses, and file paths.

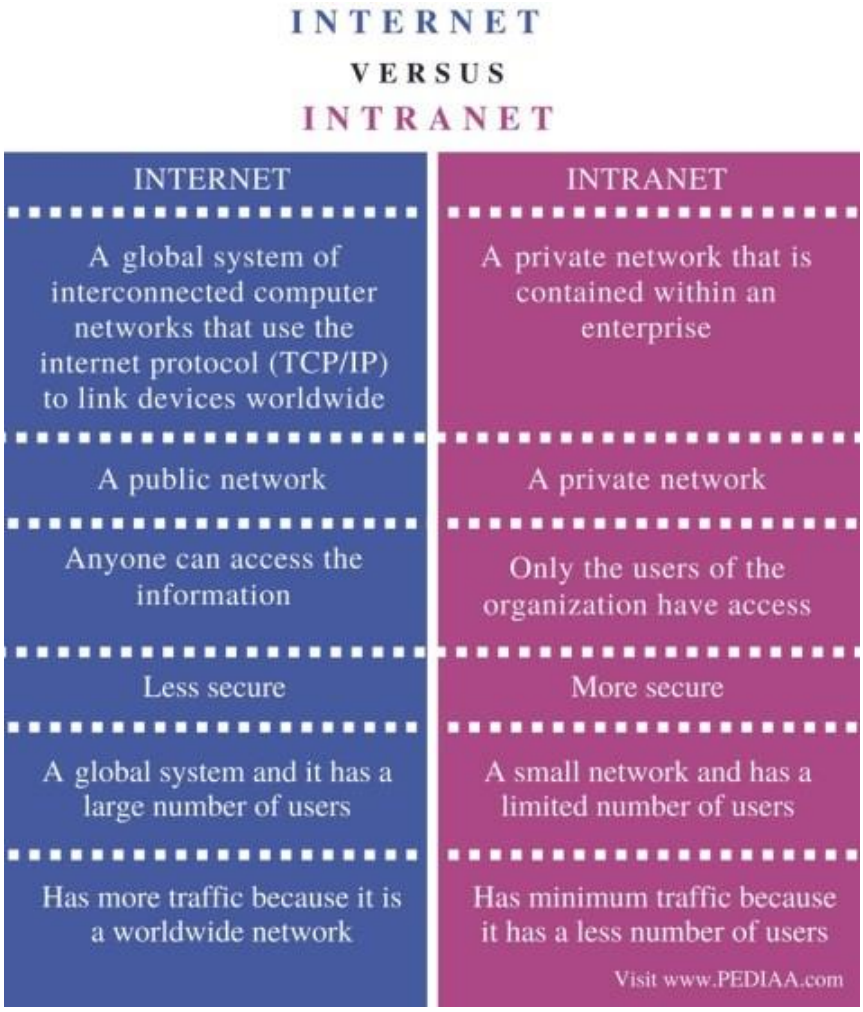
3. Domain Name System (DNS): This translates human-readable domain names (e.g., <invalid URL removed>) into numerical IP addresses that computers can understand and use to locate web servers.

4**. Hypertext Markup Language (HTML):** This defines the structure and content of web pages, specifying text, images, links, and other elements. HTML uses tags to format content and create interactive elements.

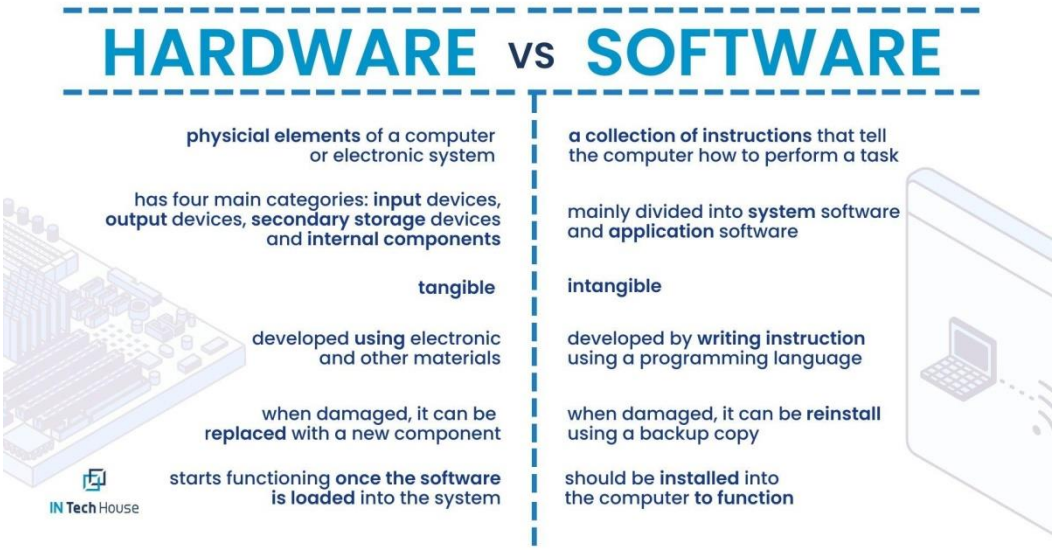
5. **Cascading Style Sheets (CSS):** This controls the visual presentation of web pages, defining styling rules for layout, fonts, colors, and other visual aspects. CSS allows for consistent brand identity and improves the user experience.

6. **JavaScript:** This is a scripting language that adds interactivity and dynamic behavior to web pages. It allows you to create animations, validate forms, and respond to user actions.
7. **Secure Hypertext Transfer Protocol (HTTPS):** This is a secure version of HTTP that encrypts communication between the browser and the server, protecting sensitive information like passwords and credit card details.

Q7. State difference between Internet and Intranet.
Ans:



Q8. State difference between hardware and software.
Ans:



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Chapter-3

Electronic Payment System

Q1. What do you understand by Electronic Payment System?
Ans: An electronic payment system (EPS), also known as an e-payment system, is a digital method of transferring funds between two parties without using physical cash or checks. These systems offer a convenient, secure, and efficient way to conduct transactions online and in person.

Q2. Explain EPI characteristics, benefits, types and challenges.
Ans: Key Characteristics:
Digital transactions: The core aspect of EPS involves the transfer of funds electronically, eliminating the need for physical currency.
Various methods: E-payment systems encompass a wide range of methods, including credit cards, debit cards, prepaid cards, mobile wallets, online bank transfers, and even cryptocurrencies.

Benefits:
Convenience: Transactions can be initiated and completed quickly and easily, often with just a few clicks or taps.
Security: Encryption and other security measures are implemented to protect sensitive financial information.
Efficiency: E-payment systems automate many aspects of the transaction process, saving time and resources.
Record-keeping: Transactions are digitally recorded, providing an easy-to-track history for both parties.
Global reach: Many EPS allow for international transactions, facilitating cross-border trade and commerce.

Types of Electronic Payment Systems:

Card-based systems: Credit cards, debit cards, and prepaid cards are widely used for both online and physical transactions.
Direct debit: Funds are directly transferred from a customer's bank account to the recipient's account upon authorization.
Mobile wallets: Apps like Apple Pay and Google Pay store payment information and enable contactless payments using smartphones.
Online payment gateways: Platforms like PayPal facilitate online transactions between buyers and sellers by securely processing payments.
Peer-to-peer (P2P) payments: Apps like Venmo allow for instant money transfers between individuals.
Cryptocurrencies: Digital currencies like Bitcoin offer a decentralized payment system, though with unique risks and regulations.

Considerations and Challenges:

Security: Ensuring data security and preventing fraud remain crucial challenges in the e-payment space.
Accessibility: Not everyone has equal access to technology and infrastructure required for digital payments.
Regulations: Evolving regulations must keep pace with the rapidly changing landscape of e-payment systems.
Fees: Some e-payment methods may incur transaction fees, impacting individual and business decisions.

Q3. Explain security issues to electronic payment systems.
Ans: Key security issues to be aware of:
Data Breaches:
Hacking: Malicious actors can target vulnerabilities in e-payment systems or merchant websites to steal sensitive information like credit card numbers, account details, and personal data.
Data leaks: Accidental exposures of sensitive information due to human error, system malfunctions, or insider threats can also compromise user security.

Cyberattacks:
Phishing: Deceptive emails, texts, or websites masquerade as legitimate entities to trick users into revealing personal information or clicking malicious links.
Malware: Software specifically designed to steal data, gain unauthorized access, or disrupt operations can infect user devices or infiltrate systems.
Man-in-the-middle attacks: Hackers intercept communication between users and payment systems, capturing sensitive information during the transaction.

Fraud:
Identity theft: Stolen personal information can be used to create fake accounts or impersonate legitimate users to conduct fraudulent transactions.
Card-not-present fraud: Online transactions lack physical verification, making them more susceptible to fraudulent use of stolen card details.
Money laundering: Criminals may exploit e-payment systems to launder illegally obtained funds.

Other Security Concerns:
Weak passwords and authentication: Users choosing weak passwords or neglecting two-factor authentication leave their accounts vulnerable.
Unsecured networks: Using public Wi-Fi or insecure connections for e-payments increases the risk of data interception.
Social engineering: Deceptive tactics like phone calls or impersonation can manipulate users into revealing sensitive information.

Q4. What is Electronic Banking? Explain its types.
Ans: Electronic banking, also known as e-banking, refers to the use of electronic devices and communication channels to access and manage your bank accounts remotely. It has revolutionized the way we interact with our finances, offering convenience, speed, and security compared to traditional methods like visiting a physical bank branch.

The common types of electronic banking:

Internet banking: This allows you to access your bank accounts online through a web browser on your computer or laptop. You can check your account balances, transfer funds between accounts, pay bills, and more.

Mobile banking: This allows you to access your bank accounts through a mobile app on your smartphone or tablet. You can do most of the same things you can do with internet banking, plus deposit checks by taking photos of them with your phone.

Online bill pay: This allows you to pay your bills electronically through your bank's website or mobile app. You can set up recurring payments or one-time payments, and you can track your payment history.

Electronic funds transfer (EFT): This allows you to transfer funds electronically between your bank accounts or to other people's bank accounts. There are different types of EFTs, such as wire transfers, ACH transfers, and P2P payments.

Automated teller machine (ATM): An ATM is a self-service kiosk that allows you to withdraw cash, deposit checks, transfer funds, and more. ATMs are located in banks, convenience stores, and other locations.

Q5. What do you understand by Electronic Stock Trading?
Ans: Electronic stock trading, also known as e-trading, refers to the buying and selling of shares, bonds, and other financial instruments through electronic platforms instead of traditional methods like open outcry trading on a stock exchange floor.

Q6. What are the key elements of Electronic Stock Trading?
Ans: **Platforms:**
Online brokers: These offer user-friendly interfaces for individuals to trade various securities. Popular examples include E-Trade, TD Ameritrade, and Fidelity.
Institutional trading platforms: These cater to professional investors and high-volume trading needs, providing advanced features and analytics. Examples include Bloomberg Terminal and Refinitiv Workspace.

Order types:
Market orders: Executed immediately at the best available price.
Limit orders: Executed only at a specified price or better, ensuring control over execution price.
Stop-loss orders: Automatically sell a security if the price falls below a set point, limiting potential losses.

Market participants:
Individual investors: Participate directly through online brokers.
Institutional investors: Use specialized platforms and employ professional traders.
Market makers: Provide liquidity by continuously quoting buy and sell prices.

Other factors to consider:
Trading fees: Different brokers charge varying fees for trades, so it's important to compare before choosing one.
Margin trading: This allows investors to borrow money from their broker to buy more shares, but it also amplifies potential losses.

Regulations: The financial markets are heavily regulated, so it's important to be aware of the rules and regulations that apply to your trading activity.

Risks to consider:
Volatility: Rapid price movements can lead to significant gains or losses.
Technical glitches: Platform outages or malfunctions can disrupt trading activity.
Fraudulent activity: Be cautious of scams and phishing attempts targeting online investors.

Overall, electronic stock trading empowers investors with greater control, speed, and information access. However, careful research, risk management, and a solid understanding of the market are crucial for successful participation.

Chapter-4

Data Warehousing

Q1. What is Data Warehouse?

Ans: A data warehouse is a central system used for effectively storing and managing large sets of business data – a combination of current and historical data – from multiple sources to help companies collect insights and make data-informed business decisions. A data warehouse, in this context, is a cloud-based system for gathering, organizing, and storing information about your customers. A data warehouse creates a single digital place for you to review your information.

Q2. What are the benefits of using Data Warehouse?

Ans: The main benefit hands-down is storing, analyzing, and extracting value from large amounts of data while keeping access to historical data for record-keeping of past trends and decisions. Here's a list of other benefits of having a data warehouse:

- **Complete information** – with data warehousing, decision-makers have single-view access to data from various sources with a wide set of features to perform analysis on this data
- **Fast queries** – data warehouses ensure rapid data retrieval and analysis of large amounts of consolidated data without developer input
- **Data quality** – data warehousing systems transform all data into a consistent format delivering high-quality, accurate data at all times
- **Scaling flexibility** – with cloud data warehousing, it is possible to purchase close to unlimited data storage, dynamically scale it up or down, and use it from anywhere
- **New tech** – cloud data warehouses allow you to integrate new technologies with ease such as machine learning and AI.
- **Consistency -** Data warehousing typically involves converting data from multiple sources and formats into one standard format, making it easier for users to analyze and share insights on the entire collection of data. More consistent data means that individual business departments such as marketing, sales, and finance can use the same data resource for queries and reports to produce results consistent with the other departments.
- **Centrality -** Most organizations need to merge data from multiple subsystems built on different platforms to perform valuable business intelligence. Data warehousing solves this problem by consolidating data into a single repository, making all the organization's data available from a centralized location.

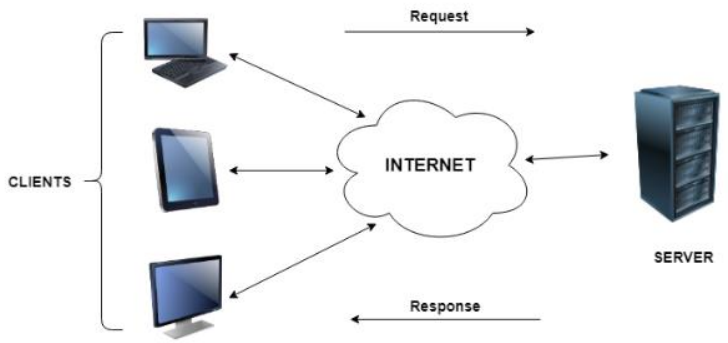
- **Access -** Data warehousing improves end-user access to a wide range of enterprise data. In many cases, business users and decision-makers have to log into every individual department system and manually consolidate data or request reports through IT personnel to get the data they need. Using a data warehouse, business users can generate reports and queries on their own. Users can access all the organization's data from one interface instead of having to log into multiple systems. Easier access to data means less time spent on data retrieval and more time on data analysis.

- **Auditability -** The goal of a data warehouse is to ensure that data is accurate, current, and accessible—which is also the goal of the auditing process. The use of a data warehouse can ensure data integrity through implemented controls for roles and responsibilities related to extracting data from source systems and migrating to the data warehouse. Security controls implemented within the data warehouse ensure that users only have read access to data.

- **Data sanitization -** When data gets integrated from multiple systems, it can become inconsistent because of incomplete, duplicated, or redundant information. If the data is not cleansed or corrected, these errors could reflect in queries and reports, leading to inaccurate insights. Data warehouses use a sanitization process to eliminate poor-quality information from the data repository. The method detects duplicate, corrupt, or inaccurate data sets, then replaces, modifies, or deletes records to ensure data integrity and consistency.

Q3. What do you understand by Client Server Computin?

Ans: In client server computing, the clients request a resource and the server provides that resource. A server may serve multiple clients at the same time while a client is in contact with only one server. Both the client and server usually communicate via a computer network but sometimes they may reside in the same system.



Characteristics of Client Server Computing

1. The client server computing works with a system of request and response. The client sends a request to the server and the server responds with the desired information.
2. The client and server should follow a common communication protocol so they can easily

interact with each other. All the communication protocols are available at the application layer.

3. A server can only accommodate a limited number of client requests at a time. So it uses a system based to priority to respond to the requests.
4. Denial of Service attacks hinders servers' ability to respond to authentic client requests by inundating it with false requests.

An example of a client server computing system is a web server. It returns the web pages to the clients that requested them.

Q4. State advantages and disadvantages of Client Server Computing.

Ans: The different advantages of client server computing are −

1. All the required data is concentrated in a single place i.e. the server. So it is easy to protect the data and provide authorization and authentication.
2. The server need not be located physically close to the clients. Yet the data can be accessed efficiently.
3. It is easy to replace, upgrade or relocate the nodes in the client server model because all the nodes are independent and request data only from the server.
4. All the nodes i.e clients and server may not be build on similar platforms yet they can easily facilitate the transfer of data.

Disadvantages of Client Server Computing

1. If all the clients simultaneously request data from the server, it may get overloaded. This may lead to congestion in the network.
2. If the server fails for any reason, then none of the requests of the clients can be fulfilled. This leads of failure of the client server network.
3. The cost of setting and maintaining a client server model are quite high.

Chapter-5

Enterprise Resource Planning (ERP)

Q1. What is Enterprise Resource Planning?

Ans: Enterprise resource planning (ERP) is a software system that helps organizations manage and integrate the core business processes, often in real-time, across various departments like finance, accounting, procurement, project management, risk management and compliance, and supply chain operations. An ERP system acts as a centralized hub for all the organization's data, streamlining operations and improving efficiency.

Q2. What are the benefits of using ERP?

Ans: Some of the key benefits of using an ERP system:

1. **Improved data accuracy and consistency:** ERP systems eliminate the need for manual data entry and duplication, which can lead to errors and inconsistencies.
2. **Enhanced visibility and reporting:** ERP systems provide real-time insights into all aspects of the business, which allows managers to make better decisions.
3. **Increased efficiency and productivity:** ERP systems automate many manual tasks, which frees up employees to focus on more strategic work.
4. **Improved collaboration:** ERP systems provide a platform for employees across different departments to collaborate and share information.
5. **Reduced costs:** ERP systems can help organizations save money by reducing errors, improving efficiency, and streamlining operations.

Q3. State Different function of ERP.

Ans: The core functions of Enterprise Resource Planning (ERP) systems, categorized by the different departments they typically serve:

1. Financial Management:

Manage accounts payable and receivable
Track general ledger transactions
Prepare financial statements
Budgeting and forecasting
Cash flow management
Tax compliance
Financial Management in ERP

2. Human Capital Management:

Recruiting and onboarding employees
Manage payroll and benefits
Performance management
Training and development
Employee relations

3. Supply Chain Management:

Procurement of goods and services
Inventory management

Warehouse management
Order fulfillment
Transportation management
Supplier relationship management

4. Customer Relationship Management:
Sales order processing
Customer service and support
Marketing automation
Lead management
Customer loyalty programs

5. Project Management:
Project planning and scheduling
Resource allocation
Budgeting and cost control
Risk management
Project tracking and reporting

6. Manufacturing:
Production planning and scheduling
Quality control
Inventory management
Maintenance management
Shop floor control

These are just some of the common functions of ERP systems. The specific features and functionalities will vary depending on the vendor and the specific needs of the organization. However, all ERP systems are designed to help organizations streamline their operations, improve efficiency, and gain a competitive edge.

Q4. Define System Analysis Program.
Ans: A system analysis program in e-commerce refers to a structured process for examining, evaluating, and understanding the various systems and processes involved in running an online store. Its goal is to identify areas for improvement, optimize existing systems, and ultimately enhance the overall customer experience and business efficiency.

Q5. Explain Business Intelligence with its elements and benefits.
Ans: Business intelligence (BI) refers to the strategies, technologies, and practices used by organizations to collect, analyze, and transform data into actionable insights that inform better decision-making. It's like having a powerful microscope for your business, allowing you to see patterns, trends, and hidden connections within your data that you might otherwise miss.

The key aspects of BI:

Data Collection: BI gathers data from various sources, including internal systems (sales, marketing, finance), external sources (market research, social media), and unstructured data (text, images, videos).

Data Analysis: It employs various techniques like data mining, statistical analysis, and machine learning to process and analyze the collected data, uncovering meaningful patterns and trends.

Data Visualization: The insights derived from analysis are presented in user-friendly formats like dashboards, reports, and charts, making them easily understandable by decision-makers across various levels of the organization.

Benefits of BI:

Improved decision-making: Data-driven insights help businesses make informed decisions based on facts and trends, rather than intuition or guesswork.
Increased efficiency: Identifying inefficiencies and bottlenecks in operations allows for process optimization and cost reduction.
Enhanced customer experience: Understanding customer behavior through data analysis enables businesses to personalize offerings and improve customer satisfaction.
Competitive advantage: Gaining insights into industry trends and competitor activity allows businesses to stay ahead of the curve and adapt their strategies accordingly.

Examples of BI applications:
Retailer analyzing sales data to identify top-selling products and optimize inventory management.
Manufacturer using predictive analytics to forecast demand and prevent stockouts.
Financial institution analyzing customer data to assess creditworthiness and offer personalized loan options.

BI is not just about technology; it's a cultural shift within an organization towards a data-driven approach to decision-making. By effectively utilizing BI tools and practices, businesses can gain a significant competitive edge and achieve their strategic goals.

Q6. State difference between Business Intelligence and ERP.
Ans: Both Business Intelligence (BI) and Enterprise Resource Planning (ERP) are important tools for businesses, but they serve different purposes and have distinct functionalities. Here's a breakdown of the key differences:

1. Focus:

ERP: Focuses on managing and integrating core business processes like finance, accounting, supply chain, human resources, and customer relationship management. It acts as a centralized system for operational data and streamlines daily activities.
BI: Focuses on analyzing and transforming data into actionable insights. It gathers data from various sources, including ERP systems, and helps businesses understand trends, identify opportunities, and make informed decisions.

2. Data:

ERP: Deals primarily with transactional data generated from daily operations, like sales orders, inventory levels, and financial transactions.
BI: Works with a wider range of data, including historical data, external data, and unstructured data like customer reviews and social media mentions.

3. Output:

ERP: Provides real-time operational reports, dashboards, and alerts to monitor and manage everyday processes.
BI: Delivers strategic insights, trends, and forecasts based on historical and diverse data sets,

helping businesses make long-term decisions.

4. Users:

ERP: Primarily used by operational staff in various departments like finance, sales, and logistics.
BI: Used by decision-makers across different levels, including management, executives, and marketing teams.

5. Analogy: Imagine a restaurant:

ERP: Like the kitchen, it manages daily operations like taking orders, preparing food, and managing inventory.
BI: Like the head chef analyzing past menus, customer feedback, and market trends to make informed decisions about future dishes and marketing strategies.

6. Integration:

While distinct, ERP and BI can be integrated for a more holistic view of the business. BI can leverage data from ERP for deeper analysis, while ERP can benefit from BI insights for process improvements.

In summary:

ERP is the engine that runs the business.
BI is the compass that guides the business.
Both are essential tools for different aspects of business operations, and their combined use can be powerful for achieving organizational goals.

Q7. How Ethics are useful in E-Commerce ERP?
Ans: Ethics refers to the principles and values that guide businesses in their online operations. It encompasses a wide range of considerations, impacting how e-commerce businesses interact with customers, employees, suppliers, the environment.
Overall Benefits of Ethical E-commerce ERP:

Enhanced brand reputation: Demonstrating ethical practices through the ERP system builds trust and strengthens brand reputation, attracting customers who value ethical business conduct.
Reduced risks and compliance: Adhering to ethical principles helps businesses comply with data privacy regulations and avoid legal risks associated with data misuse.
Improved stakeholder relationships: Ethical considerations foster trust and transparency with customers, suppliers, employees, and other stakeholders, leading to stronger relationships.
Sustainable business growth: Building an ethical foundation through the ERP system contributes to long-term sustainable growth by attracting conscious consumers and investors.

Q8. How security and government impacts E-Commerce?
Ans: Security and government regulations are two critical and often intertwining aspects of using Enterprise Resource Planning (ERP) systems. Balancing both effectively necessitates a deep understanding of potential vulnerabilities, compliance requirements, and best practices.

Security Concerns in ERP Systems:

Data Breaches: ERP systems house sensitive data across various departments, making them prime targets for cyberattacks. These attacks can lead to financial losses, reputational damage, and legal repercussions.
Access Control: Managing user access and permissions within an ERP system is crucial to prevent unauthorized individuals from accessing or manipulating critical data.
System Vulnerabilities: Software vulnerabilities and outdated systems can create exploitable entry points for malicious actors.
Insider Threats: Malicious insiders with authorized access can pose a significant security risk, requiring robust internal controls and monitoring.

Government Regulations and ERP:

Industry-Specific Regulations: Different industries, like healthcare and finance, have their own sets of data privacy and security regulations that ERP systems must comply with.
Data Privacy Regulations: Regulations like GDPR (Europe) and CCPA (California) govern how personal data is collected, stored, and used, impacting ERP data management practices.
Cybersecurity Frameworks: National and international cyber security frameworks like NIST CSF and ISO 27001 provide best practices for securing IT systems, including ERP.