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CHAPTER 4: E-COMMERCE, M-COMMERCE AND EMERGING TECHNOLOGIES

Atul Kumar Gupta



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- The presentation is to help students understand the nuances of the subject, get a better grip on it. Any example given is help gain proper perspective to the issue in hand and in no way intended to degrade, denounce any person or and technology being used.
- The presentation is based on study module.
- HAPPY LEARNING...

A request at the start

- Please ask questions during the session's,
- It adds to learning curve
- Thanks

Chapter 4: E-COMMERCE, M-COMMERCE AND EMERGING TECHNOLOGIES

- Chapter Learning Objectives...1
- Understand the meaning, components and architecture of E-commerce.
- Grasp the knowledge about the process flows in E-commerce transactions.
- Recognize applicable laws and guidance governing E-Commerce.

Chapter 4: E-COMMERCE, M-COMMERCE AND EMERGING TECHNOLOGIES

- Chapter Learning Objectives...2
- Comprehend the various aspects of risks and controls in E-commerce.
- Acknowledge a basic understanding on the paradigms of various Computing Technologies like Cloud Computing, Grid Computing, Mobile Computing, Green Computing and BYOD etc.

Chapter 4: E-COMMERCE, M-COMMERCE AND EMERGING TECHNOLOGIES...Content 1

- Introduction
- Components
- Architecture
- Work Flow Diagram for E-Commerce
- Risks and Controls Related to E-Commerce
- Guidelines and Laws Governing E-Commerce

Chapter 4: E-COMMERCE, M-COMMERCE AND EMERGING TECHNOLOGIES...Content 2

- Digital Payments
- Computing Technologies
- Case Studies

Introduction...1

- **E-Commerce:** “Sale / Purchase of goods / services through electronic mode is e-commerce.” This could include the use of technology in the form of Computers, Desktops, Mobile Applications, etc.
- **Impact : Users ways of doing things**

Introduction...2

- **E-Commerce** is the process of doing business electronically. It refers to the use of technology to enhance the processing of commercial transactions between a company, its customers and its business partners. It involves the automation of a variety of Business-To-Business (B2B) and Business-To-Consumer (B2C) transactions through reliable and secure connections.

Introduction...3

- Traditional Commerce and E-Commerce
- Difference between Traditional Commerce and E-Commerce
- Illustration of E-Commerce Transaction
- Benefits of E-Business
- Disadvantages of E-Business
- E-Commerce Business Models
- E-Commerce Future

Introduction

Traditional Commerce and E-Commerce

Activity	T-Commerce	E-Commerce
Wake up	Alarm clocks with snooze buttons.	Mobile alarms, multiple types. Some forcing you to solve mathematical quiz before you snooze them. Ensuring you wake up.
Procurements	Go shop by shop to check price and quality	It is possible to search all products online, buyer can compare prices and order online. Few online sellers are giving facility of delivery within 12 hours of ordering.

Introduction

Traditional Commerce Vs E-Commerce...1

Base	T-Commerce	E-Commerce
Definition	Traditional commerce includes all those activities which encourage exchange, in some way or the other of goods / services which are manual and non- electronic.	E-Commerce means carrying out commercial transactions or exchange of information, electronically on the internet.
Transaction Processing	Manual	Electronically
Availability for commercial transactions	For limited time.	24×7×365

Introduction

Traditional Commerce Vs E-Commerce...2

Base	T-Commerce	E-Commerce
Nature of purchase	Goods can be inspected physically before purchase.	Goods cannot be inspected physically before purchase.
Customer interaction	Face-to-face	Screen-to-face
Business Scope	Limited to particular area.	Worldwide reach

Introduction

Traditional Commerce Vs E-Commerce...3

Information exchange	No uniform platform for exchange of information.	Provides a uniform platform for information exchange.
Resource focus	Supply side	Demand side
Marketing	One way marketing	One-to-one marketing
Payment	Cash, cheque, credit card, etc.	Credit card, fund transfer, Cash in Delivery, Payment Wallets, UPCI application etc.

Introduction

Traditional Commerce Vs E-Commerce...4

Delivery of goods	Instantly	Takes time, but now e-commerce websites have created options of same day delivery, or delivery within 4 hours. This option is restricted to number of cities as of now. AMAZON has already started delivery in United States of America through drones.
Fraud	Relatively lesser as there is personal interaction between the buyer and the seller.	Lack of physical presence in markets and unclear legal issues give loopholes for frauds.
Process	Because of manual processing of business transactions; chances of clerical errors are high.	Automated processing of business transactions minimizes the clerical errors. Manufacturers can have better inventory management. As they will always know what products customers are buying. They shall be able to maintain inventory on JIT (Just in Time) basis.

Introduction

Traditional Commerce Vs E-Commerce...5

Profit Impact	The cost incurred on the middlemen, overhead, inventory and limited sales reduces the profit of the organization.	By increasing sales, cutting cost and streamlining operating processes - (i) The profits margin of manufacturers is increased. (ii) Above (i) allow manufacturers to give discounts to customers. (iii) Customers get better prices.
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Introduction

Illustrations for E-Commerce

- Step 1: Go to website
- Step 2: Scan the product / service listed
- Step 3: Select the product / service you wish to procure
- Step 4: Go to payment link
- Step 5: Verify selected p/s while making payment
- Step 6: Select payment option
- Step 7: Complete payment process
- Step 8: Get delivery as per terms

Introduction

Benefits of E-Commerce...1

- **Benefits to Customer / Individual / User**
- **Benefits to Business / Sellers**
- **Benefits to Government**

Introduction

Benefits of E-Commerce...2

- **Benefits to Customer / Individual / User**
- Convenience:
- Time saving
- Various Options
- Easy to find review
- Coupon and Deals
- Anytime Access
- Reduction in costs

Introduction

Benefits of E-Commerce...3

■ Benefits to Business / Sellers..1

- Increased Customer Base
- Recurring payments made easy
- Instant Transaction
- Provides a dynamic market
- Reduction in costs

Introduction

Benefits of E-Commerce...4

- **Benefits to Business / Sellers...2**
- Creation of new markets and easy entry in new markets
- Low barriers to entry
- Time Delays removed
- Better quality products
- Efficiency improvement due to
 - Reduction in time to complete
 - Reduction in errors
 - Reduction in Inventory

Introduction

Benefits of E-Commerce...5

■ Benefits to Government

- Instrument to fight corruption:-In line with Government's vision, e commerce provides a pivotal hand to fight corruption.
- Reduction in use of ecologically damaging materials through electronic coordination of activities and the movement of information rather than physical objects).

Introduction

Disadvantages of E-Business

- Internet Connection is a must
- High Start-up costs
 - *Connection Costs*
 - *Hardware / Software*
 - *Set up*
 - *Maintenance*
- Legal Issues
- Some businesses can never be put on e-commerce
- Cultural impediments to e-commerce
- Security Concern

Introduction

E-Commerce Business Models...1

- Definition
- Types

Introduction

E-Commerce Business Models...2

■ Definition

- A Business Model can be defined as the organization of product, service and information flows, and the sources of revenues and benefits for suppliers and customers. An e-business model is the adaptation of an organization's business model to the internet economy

Introduction

E-Commerce Business Models...3

- Types:

- E-Markets
- E-Business Models

Introduction

E-Commerce Business Models...4

■ Types: E-Markets...1

- e-Shops: An e-shop is a virtual store front that sells products and services online.
- e-Malls: The e-mall is defined as the retailing model of a shopping mall, a conglomeration of different shops situated in a convenient location in e-commerce.
- e-auctions : Electronic auctions.
- Portals: Portals are the channels through which websites are offered as content. The control of content can be a source of revenue for firms through charging firms for advertising or charging consumers a subscription for access.

Introduction

E-Commerce Business Models...5

- **Types: E-Markets...2**
- **Buyer Aggregators:** The Buyer Aggregator brings together large numbers of individual buyers so that they can gain the types of savings that are usually the privilege of large volume buyers. Example - www.zomato.com
- **Virtual Communities:** community of customers who share a common interest and use the internet to communicate with each other.
- **e-marketing:** Use of electronic communications technology such as the internet, to achieve marketing objectives. Of course, information on websites also empowers customers and helps them achieve their objectives.

Introduction

E-Commerce Business Models...6

- **Types: E-Markets...3**
- e- procurement: Management of all procurement activities via electronic means. Business models based on e-procurement seek efficiency in accessing information on suppliers, availability, price, quality and delivery times as well as cost savings by collaborating with partners to pool their buying power and secure best value deals.
- e-distribution: The e-distribution model helps distributors to achieve efficiency savings by managing large volumes of customers, automating orders, communicating with partners and facilitating value-adding services such as order tracking through each point in the supply chain.

Introduction

E-Commerce Business Models...7

- **Types: E-Business Models**
- C2C
- B2C
- B2B
- C2B
- C2G
- G2C
- B2G

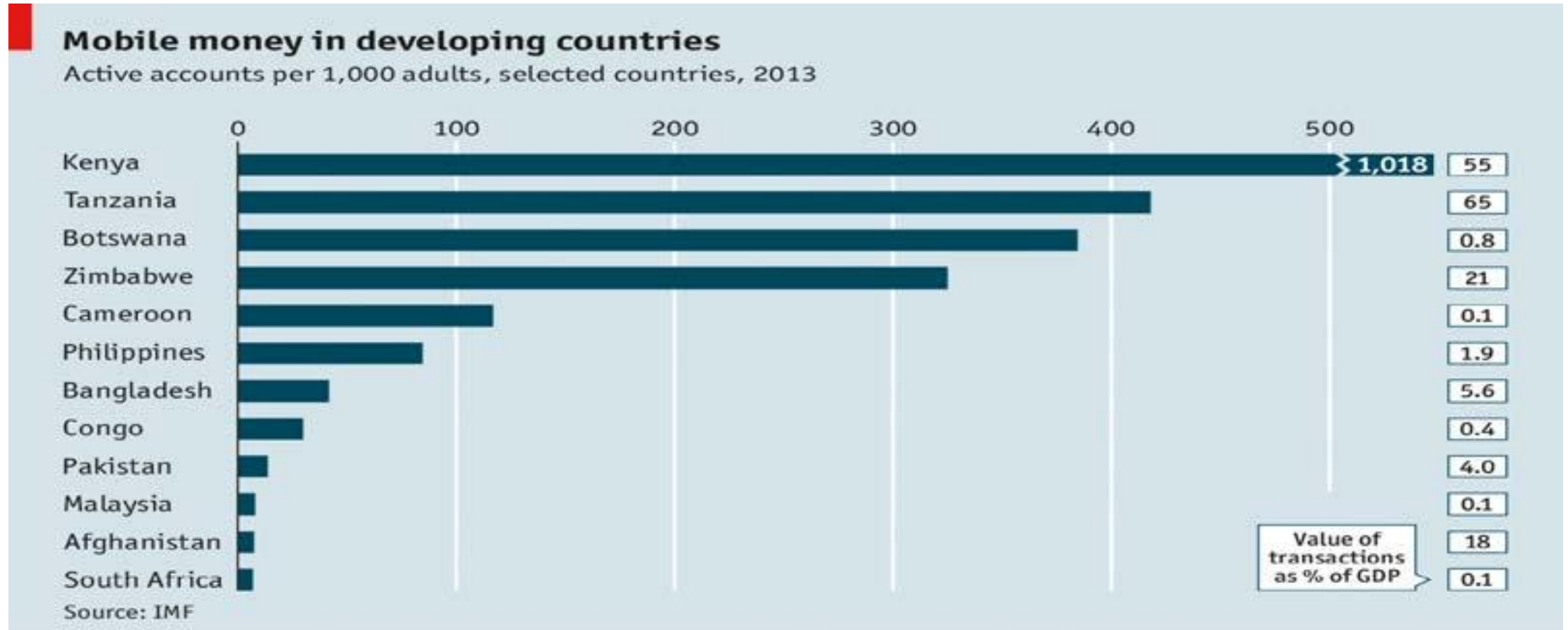
Introduction

E-Commerce Future

- From 1997, E-commerce has increased in leaps and bounds. Data by The Economist magazine for 2013 as shown in Fig. 4.1.3 is a pointer that E-commerce via mobiles is not only limited to developed world. Looking to data, developing/third world countries have adopted it faster.
- **Future is VV Bright**

Introduction

E-Commerce Future



Introduction

- Traditional Commerce and E-Commerce
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- Benefits of E-Business
- Dis-advantages of E-Commerce
- E-Commerce Business Models
- E-Commerce Future

Chapter 4: E-COMMERCE, M-COMMERCE AND EMERGING TECHNOLOGIES...Content 1

- Introduction
- **Components**
- Architecture
- Work Flow Diagram for E-Commerce
- Risks and Controls Related to E-Commerce
- Guidelines and Laws Governing E-Commerce

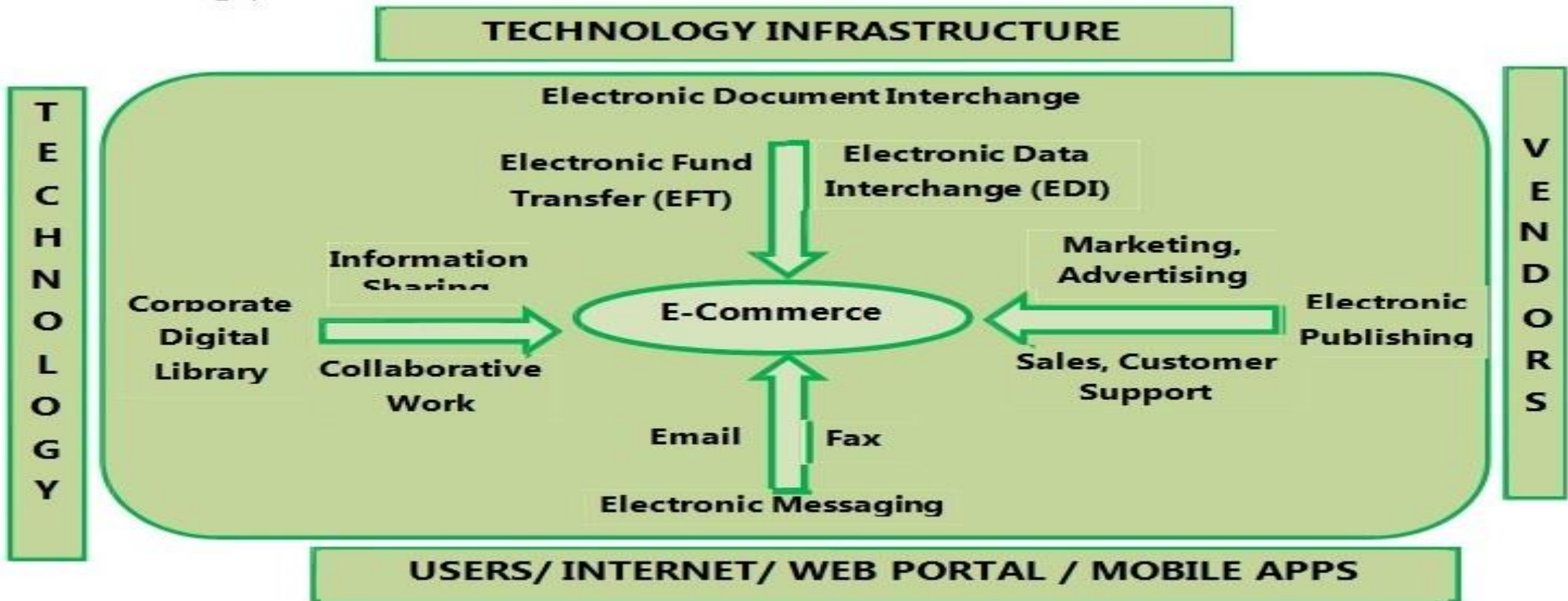
Chapter 4: E-COMMERCE, M-COMMERCE AND EMERGING TECHNOLOGIES...Content 2

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- Computing Technologies
- Case Studies

Components...1

- User
- E-commerce Vendors
- Technology Infrastructure
- Internet/Network
- Web portal
- Payment Gateway

Components Chart...2



Components...3

- **Users**

- This may be individual / organization or anybody using the e-commerce platforms. As e-commerce, has made procurement easy and simple, just on a click of button e-commerce vendors needs to ensure that their products are not delivered to wrong users.

Components...4

- **E – Commerce Vendors...1**

- This is the organization / entity providing the user, goods/ services asked for.
- Few Quality parameters E-Commerce vendors need to meet ...

Components...5

■ E – Commerce Vendors..1

- Suppliers and Supply Chain Management
- Warehouse operations
- Shipping and returns
- E-Commerce catalogue and product display
- Marketing and loyalty programs

Components...6

■ E – Commerce Vendors..2

- Showroom and offline purchase
- Different Ordering Methods
- Guarantees
- Privacy Policy
- Security

Components...7

- **Technology Infrastructure..1: Characteristics**
- Scalable
- Easy to use and convenient
- Responsive Design

Components...8

- **Technology Infrastructure..1**
 - Computers, Servers and Database
 - Mobile Apps
 - Digital Library
 - Data Interchange

Components Technology Infrastructure...9

■ Computers, Servers and Database

- These are the backbone for the success of the venture. They store the data / program used to run the whole operation of the organization.
- As cloud computing is increasingly being used, many small / mid- sized e-commerce originations have started using shared infrastructures.

Components Technology Infrastructure...10

■ Mobile Apps

- A mobile app is a software application programmed to run specifically on a mobile devices which includes tablet computers and smart phones.
- The key applications of such apps includes
 - Mobile store front modules
 - Mobile ticketing module
 - Mobile advertising and marketing module
 - Mobile customer support and information module
 - Mobile banking Module

Components Technology Infrastructure...11

■ Digital Library

- A Digital Library is a special library with a focused collection of digital objects that can include text, visual material, audio material, video material, stored as electronic media formats (as opposed to print, microform, or other media), along with means for organizing, storing, and retrieving the files and media contained in the library collection.

Components Technology Infrastructure...12

■ Data Interchange

- Data Interchange is an electronic communication of data. For ensuring the correctness of data interchange between multiple players in e-commerce, business specific protocols are being used. There are defined standards to ensure seamless / exact communication in e-commerce.

Components...13

■ Internet/Network

- Internet connectivity is important for any e-commerce transactions to go through. Net connectivity in present days can be through traditional as well as new technology.
- The faster net connectivity leads to better e-commerce. Many mobile companies in India have launched 4G services.
- The success of e-commerce trade depends upon the internet capability of organization. At a global level, it is linked to the countries capability to create a high-speed network. The latest communication technologies like 4G, 5G have already made in-roads in India.

Components...14

■ Web portal

- This shall provide the interface through which an individual / organization shall perform e-commerce transactions.
- Web Portal is the application through which user interacts with the e-commerce vendor.
- The simplicity and clarity of content on web portal is directly linked to customer experience of buying a product online.

Components...15

■ Payment Gateway

- The payment mode through which customers shall make payments. Payment gateway represents the way e-commerce / m-commerce vendors collect their payments. The payment gateway is another critical component of e-commerce set up. These are the last and most critical part of e-commerce transactions.
- Numerous methods of payments by buyers to sellers are being used, including Credit / Debit Card Payments, Online bank payments, Vendors own payment wallet, Third Party Payment wallets, like SBI BUDDY or PAYTM, Cash on Delivery (COD) and Unified Payments Interface (UPI).

Chapter 4: E-COMMERCE, M-COMMERCE AND EMERGING TECHNOLOGIES...Content 1

- Introduction
- Components
- **Architecture of Networked System**
- Work Flow Diagram for E-Commerce
- Risks and Controls Related to E-Commerce
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Chapter 4: E-COMMERCE, M-COMMERCE AND EMERGING TECHNOLOGIES...Content 2

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Architecture of Networked System

- Definition
- Type of Architectures
 - Two Tier
 - Three Tier
- Which one to use
- E-Commerce Architecture
 - Vide Internet
 - Vide Mobile

Architecture of Networked System...1

- Definition..key words
- **Architecture** is a term to define the style of design and method of construction, used generally for buildings and other physical structures. In e-commerce, it denotes the way network architectures are build.
- **Client** is the requester of resource. Resource may be application, data or any other computing resource.
- **Server** is the provider of resource.

Architecture of Networked System...2

- Type of Architectures
 - Two tier
 - Three tier

Architecture of Networked System

Two Tier Architecture...3

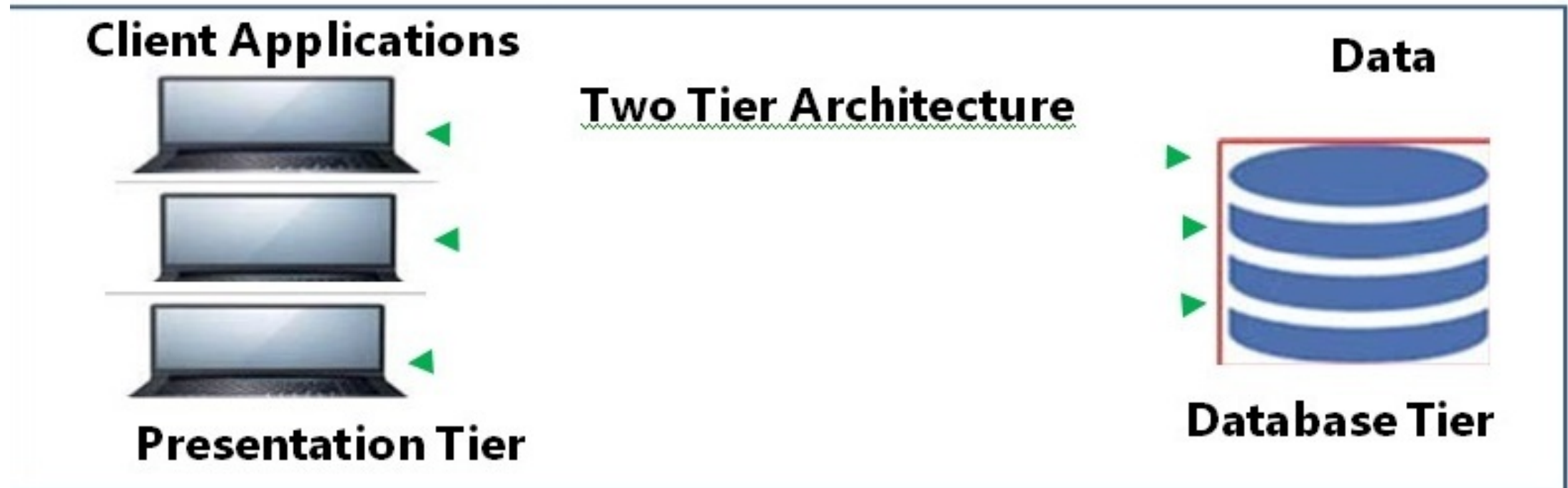
■ Definition

■ **Components** In a **Two-tier network**, client (user) sends request to Server and the Server responds to the request by fetching the data from it. The Two-tier architecture is divided into two tiers- **Presentation Tier** and **Database Tier**.

- **Presentation Tier (Client Application/Client Tier):** This is the interface that allows user to interact with the e-commerce / m-commerce vendor. User can login to an e-commerce vendor through this tier. This application also connects to database tier and displays the various products / prices to customers.
- **Database Tier (Data Tier):** The product data / price data / customer data and other related data are kept here. User has not access to data / information at this level but he/she can display all data / information stored here through application tier.

Architecture of Networked System

Two Tier Architecture...4



Architecture of Networked System

Two Tier Architecture...5

■ Advantages

- The system performance is higher because business logic and database are physically close.
- Since processing is shared between the client and server, more users could interact with system.
- By having simple structure, it is easy to setup and maintain entire system smoothly.

Architecture of Networked System

Two Tier Architecture...6

■ Disadvantage

- Performance deteriorates if number of users' increases.
- There is restricted flexibility and choice of DBMS, since data language used in server is proprietary to each vendor.

Architecture of Networked System

Three Tier Architecture...7

- Definition
- **Three - Tier architecture** is a software design pattern and well-established software architecture. Its three tiers are the **Presentation Tier**, **Application Tier** and **Data Tier**. Three-tier architecture is a client-server architecture in which the functional process logic, data access, computer data storage and user interface are developed and maintained as independent modules on separate platforms.

Architecture of Networked System

Three Tier Architecture...8

■ Components

- **Presentation Tier:** Occupies the top level and displays information related to services available on a website. This tier communicates with other tiers by sending results to the browser and other tiers in the network.
- **Application Tier:** Also, called the **Middle Tier**, **Logic Tier**, **Business Logic** or **Logic Tier**; this tier is pulled from the Presentation tier.
- **Database Tier:** This tier houses the database servers where information is stored and retrieved. Data in this tier is kept independent of application servers or business logic.

Architecture of Networked System

Three Tier Architecture...9

■ Advantages

- **Clear separation** of user-interface-control and data presentation from application-logic
- **Dynamic load balancing:** If bottlenecks in terms of performance occur, the server process can be moved to other servers at runtime.
- **Change management:** It is easy and faster to exchange a component on the server than to furnish numerous PCs with new program versions.

Architecture of Networked System

Three Tier Architecture...10

■ Disadvantages

- It creates an increased need for network traffic management, server load balancing, and fault tolerance.
- Current tools are relatively immature and are more complex.
- Maintenance tools are currently inadequate for maintaining server libraries.
- This is a potential obstacle for simplifying maintenance and promoting code reuse throughout the organization.

Architecture of Networked System

- Definition
- Type of Architectures
 - Two Tier
 - Three Tier
- **Which one to use**
- E-Commerce Architecture
 - Vide Internet
 - Vide Mobile

Architecture of Networked System...11

■ Which on to use?

- In **two tier** architectures, application performance will be degraded upon increasing the users and it is cost in-effective.
- In **three-tier** architecture provides High performance, lightweight persistent objects, flexibility, maintainability, reusability and scalability, performance, high degree of flexibility in deployment, better Re- use, improved data integrity, improved security wherein client does not have direct access to database, easy to maintain and application performance is good. High degree of modularity. **All e-commerce applications follow the three-tier network architecture**

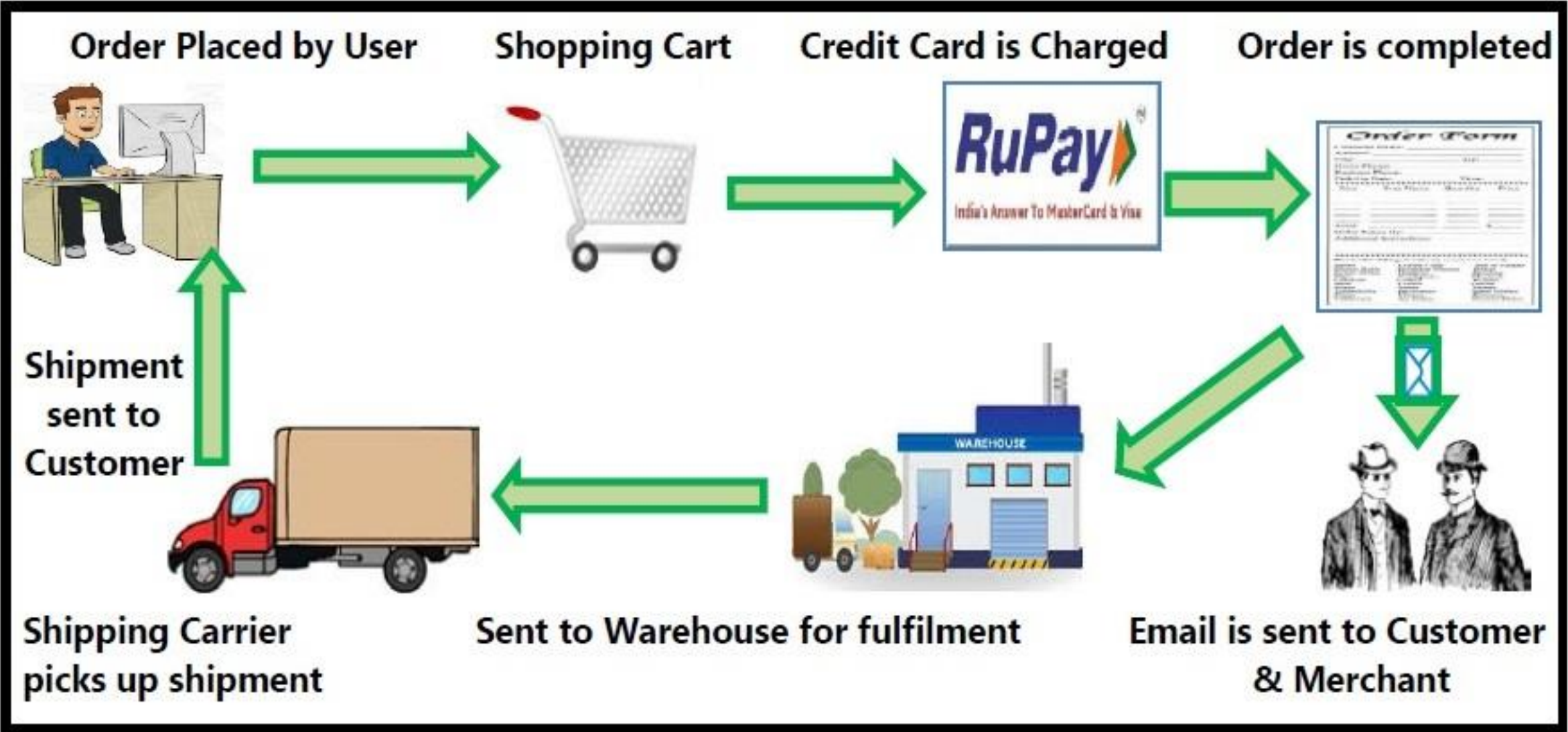
Architecture of Networked System...12

- **E-Commerce Architecture**
 - Vide Internet
- **A detailed table follows..**

Architecture of Networked System

E-Commerce Architecture Vide Internet...13

Client/ User Interface	Web Server, Web Browser and Internet. For example: In example (Fig. 4.3.3) where user buys a mobile phone from an e-commerce merchant it includes - User, Web Browser (Internet Explorer/Chrome) & Web Server	This layer helps the e-commerce customer connect to e-commerce merchant.
Application Layer	Application Server and Back End Server. For example - In the same example, it includes: <ul style="list-style-type: none">- E-merchant- Reseller- Logistics partner	Through these application's customer logs to merchant systems. This layer allows customer to check the products available on merchant's website.
Database Layer	The information store house, where all data relating to products and price is kept.	This layer is accessible to user through application layer.



Architecture of Networked System...15

■ E-Commerce Architecture

- Vide Internet
- **Vide Mobile:** M-commerce (mobile commerce) is the buying and selling of goods and services through wireless handheld devices such as cellular telephone and Personal Digital Assistants (PDAs). M-commerce enables users to access the Internet without needing to find a place to plug in.

Architecture of Networked System...16

- **E-Commerce Architecture vide Mobile**

- The key growth in the mobile e-Commerce sector in recent years has been in through so-called Apps. Apps, short for Mobile Applications, are small piece of software developed specifically for the operating systems of handheld devices such as mobile phones, PDAs and Tablet computers. Mobile Apps can come preloaded on handheld devices or can be downloaded by users from the app stores over the Internet.

- **A detailed table follows.**

Architecture of Networked System...17

Client / User Interface	<p>Mobile Web Browser and Internet. For example: In example discussed above where user buys a mobile phone from e-commerce merchant; it includes:</p> <ul style="list-style-type: none"> - Mobile App (Application) - User 	This layer helps the e-commerce customer connect to e-commerce merchant.
Application Layer	<p>Application Server and back end server. For example: In the same example, it includes</p> <ul style="list-style-type: none"> - E-merchant - Reseller - Logistics partner - Payment Gateway 	Through these application's customer logs to merchant systems. This layer allows customer to check the products available on merchant's website.
Database Layer	The information store house, where all data relating to products, price it kept.	This layer is accessible to user through application layer.

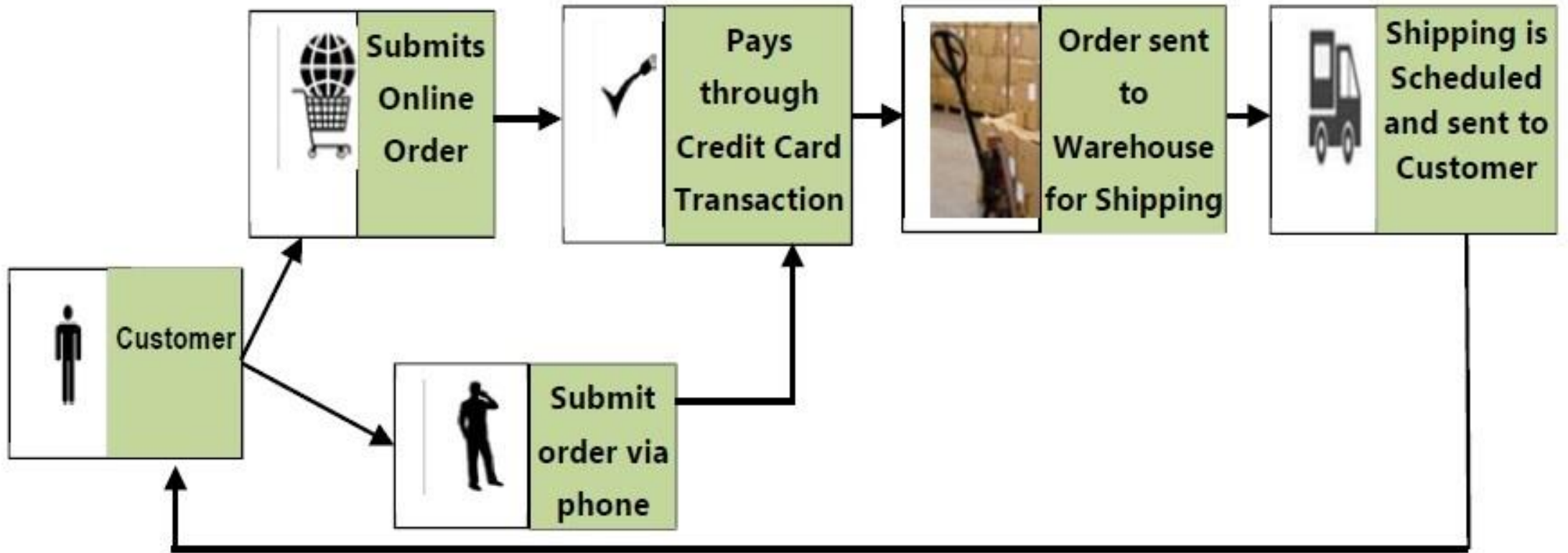
Architecture of Networked System

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Chapter 4: E-COMMERCE, M-COMMERCE AND EMERGING TECHNOLOGIES...Content 1

- Introduction
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- Architecture of Networked System
- **Work Flow Diagram for E-Commerce**
- Risks and Controls Related to E-Commerce
- Guidelines and Laws Governing E-Commerce

Work Flow Diagram for E-Commerce...1



Detailed description on next slide

Work Flow Diagram for E-Commerce...2

Step	Activities
Customers login	Few e-commerce merchants may allow same transactions to be done through phone, but the basic information flow is e- mode.
Product / Service Selection	Customer selects products / services from available options.
Customer Places Order	Order is placed for selected product / service by customer. This step leads to next important activity PAYMENT GATEWAY.
Payment Gateway	Here customer makes a selection of the payment method. In case payment methods is other than cash on delivery(COD), the merchant gets the update from payment gateway about payment realisation from customer. In case of COD, e- commerce vendor may do an additional check to validate customer.

Work Flow Diagram for E-Commerce...3

Step	Activities
Dispatch and Shipping Process	<p>This process may be executed at two different ends. First if product / service inventory is managed by e-commerce vendor, then dispatch shall be initiated at merchant warehouse.</p> <p>Second, many e-commerce merchants allow third party vendors to sale through merchant websites. For example: FLIPKART states that it has more than 1 lac registered third party vendors on its website.....contd..2</p>
Delivery Tracking	<p>Another key element denoting success of e-commerce business is timely delivery. Merchants keep a track of this. All merchants have provided their delivery staff with hand held devices, where the product / service delivery to customers are immediately updated.</p>
COD tracking	<p>In case products are sold on COD payment mode, merchants need to have additional check on matching delivery with payments.</p>

Chapter 4: E-COMMERCE, M-COMMERCE AND EMERGING TECHNOLOGIES...Content 1

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RISKS AND CONTROLS RELATED TO E-COMMERCE

- Risks in an e-Business Environment
- Control in an e-Business Environment
- Case Studies
- Cyber Security Risk Considerations

RISKS AND CONTROLS RELATED TO E-COMMERCE..1

- Privacy and Security
- Quality issues
- Delay in goods and Hidden Costs
- Needs Access to internet and lack of personal touch
- Security and credit card issues
- Infrastructure
- Problem of anonymity

RISKS AND CONTROLS RELATED TO E-COMMERCE..2

- Repudiation of contract
- Lack of authenticity of transactions
- Data Loss or theft or duplication
- Attack from hackers
- Denial of Service
- Non-recognition of electronic transactions
- Lack of audit trails

RISKS AND CONTROLS RELATED TO E-COMMERCE..3

- Problem of piracy

RISKS AND CONTROLS RELATED TO E-COMMERCE..4

- **Control in an e-Business Environment..1**
- Internal Control, as defined in accounting and auditing, is a process for assuring achievement of an organization's objectives in operational effectiveness and efficiency, reliable financial reporting, and compliance with laws, regulations and policies.
- In an e-business environment, controls are necessary for all persons in the chain. These include...

RISKS AND CONTROLS RELATED TO E-COMMERCE..5

■ Control in an e-Business Environment..2

- Users
- Sellers / Buyers / Merchants
- Government
- Network Service Providers
- Technology Service Providers
- Logistics Service Providers
- Payment Gateways

RISKS AND CONTROLS RELATED TO E-COMMERCE..6

■ Control in an e-Business Environment..3

- Users: This is important to ensure that the genuine user is using the e-commerce/m-commerce platform. There is risk if user accounts are hacked and hackers buy products / services.

RISKS AND CONTROLS RELATED TO E-COMMERCE..7

■ Control in an e-Business Environment..4

- Sellers / Buyers / Merchants: These people need to proper framework in place to ensure success of business. Many e-commerce businesses have lost huge amount of money as they did not have proper controls put in place.

These include controls on:

- Product catalogues
- Price catalogues
- Discounts and promotional schemes
- Product returns
- Accounting for cash received through Cash on Delivery mode of sales.

RISKS AND CONTROLS RELATED TO E-COMMERCE..8

■ Control in an e-Business Environment..5

- **Government:** Governments across the world and in India have few critical concerns vis-à-vis electronic transactions, namely:
 - Tax accounting of all products / services sold.
 - All products / services sold are legal. There have been instances where narcotics drugs have found to be sold and bought through electronic means.

RISKS AND CONTROLS RELATED TO E-COMMERCE..9

■ Control in an e-Business Environment..6

- **Network Service Providers:** They need to ensure availability and security of network. Any downtime of network can be disastrous for business.
- **Technology Service Providers:** These include all other service provider other than network service provider, for example, cloud computing back-ends, applications back-ends and like. They are also prone to risk of availability and security.
- **Payment Gateways:** E-commerce vendors' business shall run only when their payment gateways are efficient, effective and foolproof.

RISKS AND CONTROLS RELATED TO E-COMMERCE..10

- **Control in an e-Business Environment..7**
- **Logistics Service Providers:** Success or failure of any e-commerce / m-commerce venture finally lies here. Logistics service providers are the ones who are finally responsible for timely product deliveries.
- Each participant discussed above needs to implement controls / guidance / policies like...
 - Educating the participant about the nature of risks
 - Communication of organizational policies to its customers
 - Privacy Policies
 - Information security
 - Shipping and billing policies
 - Refund policies
 - Ensure Compliance with Industry Body Standards...

RISKS AND CONTROLS RELATED TO E-COMMERCE..11

- **Control in an e-Business Environment..8**

- **Protect your e-Commerce business from intrusion**
 - Viruses
 - Hackers
 - Passwords
 - Regular software updates
 - Sensitive data
 - Know details of your payment service provider contract.

RISKS AND CONTROLS RELATED TO E-COMMERCE

- Risks in an e-Business Environment
- Control in an e-Business Environment

■ **Case Studies**

- Cyber Security Risk Considerations

RISKS AND CONTROLS RELATED TO E-COMMERCE..12

- **Case 1: Return of Mobile**
- **Case 2: Purchase fake/inferior products online**

RISKS AND CONTROLS RELATED TO E-COMMERCE

- Risks in an e-Business Environment
- Control in an e-Business Environment
- Case Studies
- **Cyber Security Risk Considerations**

RISKS AND CONTROLS RELATED TO E-COMMERCE..13

- **Cyber Security Risk Considerations**

- **Impact**
 - Direct
 - Indirect

- SA 315 guidance on IT risks

- Controls to prevent cyber security breach

RISKS AND CONTROLS RELATED TO E-COMMERCE..14

■ Cyber Security Risk Considerations..IMPACT ..1

- The business and technological environment in which the entities operate are rapidly changing on account of the E-Commerce platforms on which most of them now operate. Therefore, it is imperative for the consideration of Cyber Security Risks in the audit procedures. There could be cyber security risks with **Direct** as well as **Indirect** impact.
 - **Direct Impact:** could be if the Application at the Company's Retailers which contains financial information has weak passwords at all Open Systems Interconnection (OSI) layers resulting in harming the integrity of data.
 - **Indirect Impact:** if the sensitive customer information in the form of Bank Account Numbers Recipes of Patented products, etc. could be breached which would result in legal and regulatory actions on the Company on account of breach of confidential information.

RISKS AND CONTROLS RELATED TO E-COMMERCE..15

- **Cyber Security Risk Considerations..2**
- **SA 315**
- As per SA 315 recognizes IT poses specific risks to an entity's Internal Control in the form of the

RISKS AND CONTROLS RELATED TO E-COMMERCE..16

■ Cyber Security Risk Considerations..3

■ SA 315...1

- Reliance on systems or programs that are inaccurately processing data, processing inaccurate data, or both.
- Unauthorized access to data that may result in destruction of data or improper changes to data, including the recording of unauthorized or non-existent transactions, or inaccurate recording of transactions. Particular risks may arise where multiple users access a common database.
- The possibility of IT personnel gaining access privileges beyond those necessary to perform their assigned duties thereby breaking down segregation of duties.

RISKS AND CONTROLS RELATED TO E-COMMERCE..17

- **Cyber Security Risk Considerations..4**
- SA 315...2
- Unauthorized changes to data in master files.
- Unauthorized changes to systems or programs.
- Failure to make necessary changes to systems or programs.
- Inappropriate manual intervention.
- Potential loss of data or inability to access data as required.

RISKS AND CONTROLS RELATED TO E-COMMERCE..18

- **Cyber Security Risk Considerations..5**
- **Controls to prevent cyber security breach ...1**
- A Network Diagram detailing server, databases, hubs, routers, internal and external network, etc.
- List of the Digital Assets used by the Company and the IT Managers responsible for the protection for those digital assets along with the physical location of those assets.
- Policy and Procedure document of the criticality of the Digital Assets, the use of those digital assets, any direct impact on the financial statements of the company, access restrictions to those assets.

RISKS AND CONTROLS RELATED TO E-COMMERCE..19

- **Cyber Security Risk Considerations..6**
- **Controls to prevent cyber security breach ...2**
- Any incidents of cyber security breach which occurred and the actions taken and controls built in to avoid them from occurring again.
- Annual review by the CIO, based on the Company's digital assets and the IT Environment in which it operates assessing which are the most critical cyber security risks and designing controls to address the same.
- Are the IT managers responsible for the safeguarding of the assets from cyber-attacks, adequately skilled and trained to perform the functions.

RISKS AND CONTROLS RELATED TO E-COMMERCE..20

- **Cyber Security Risk Considerations..7**
- **Controls to prevent cyber security breach ...3**
- The Entity should have a IT Security Policy circulated to all Employees detailing the procedures to be adhered to when accessing IT systems/ resources like password security, restricted use of internet, etc.
- Periodical review of access rights to all IT resources to ensure that the access to the users is commensurate with their functional roles and responsibilities.
- Adequate approvals exist before the access is granted to any IT resources.

RISKS AND CONTROLS RELATED TO E-COMMERCE..21

- **Cyber Security Risk Considerations..8**
- **Controls to prevent cyber security breach ...4**
- Timely employee awareness campaigns focusing on methods of intrusion which can be stopped based on individual actions.
- Use of firewalls by the Company to allow internet activity in accordance with the rules defined.
- Any baseline security configurations established by the Company under any security standards which are periodically reviewed.

RISKS AND CONTROLS RELATED TO E-COMMERCE..22

- **Cyber Security Risk Considerations..9**
- **Controls to prevent cyber security breach ...5**
- All remote access logins are configured for two factor' authentications like using of username, password, pin, token, etc.
- Any vulnerability scans or penetration testing performed by the Company and any findings noted.
- Are the backups scheduled properly and timely checked by restoration of data?
- **The above procedures are even to be considered for the assets not owned by the Company but where the Company is utilizing services from another service provider like the Server maintenance and security is outsourced to an outsourced service provider.**

Chapter 4: E-COMMERCE, M-COMMERCE AND EMERGING TECHNOLOGIES...Content 1

- Introduction
- Components
- Architecture of Networked System
- Work Flow Diagram for E-Commerce
- Risks and Controls Related to E-Commerce
- **Guidelines and Laws Governing E-Commerce**

Chapter 4: E-COMMERCE, M-COMMERCE AND EMERGING TECHNOLOGIES...Content 2

- Digital Payments
- Computing Technologies
- Case Studies

Chapter 4: E-COMMERCE, M-COMMERCE AND EMERGING TECHNOLOGIES...Content 1

■ Introduction

- Components
- Architecture
- Work Flow Diagram for E-Commerce
- Risks and Controls Related to E-Commerce
- Guidelines and Laws Governing E-Commerce

Chapter 4: E-COMMERCE, M-COMMERCE AND EMERGING TECHNOLOGIES...Content 2

- Digital Payments
- Computing Technologies
- Case Studies

MCQ 1: Tier added to two tier network architecture to make it three tier is..

- A. Presentation Tier
 - B. Database Tier
 - C. Application Tier
 - D. Data Tier
-
- **C. Application Tier**

MCQ 2: All except one denotes the risk associated with e-commerce

- A. Privacy and Security
 - B. Quality Issues
 - C. Delays in delivery
 - D. 24/7/365 availability
-
- **D. 24/7/365 availability**

MCQ 3: Technology infrastructure being a key component of E-commerce, includes all of following **except one**

- A. Computer, Server and Database
 - B. Mobile Apps
 - C. Internet
 - D. Users
-
- **D. Users**

Guidelines and Laws Governing E-Commerce

■ Guidelines for E-Commerce

- Commercial Laws Governing E-Commerce
- Special Laws governing E-Commerce

Guidelines and Laws Governing E-Commerce

Introduction

- **Guidelines for E-Commerce:** All entity going for e-commerce / m-commerce business needs to create clear policy guidelines for the following:
 - Billing
 - Product guarantee / warranty
 - Shipping
 - Delivery
 - Return
 - Payment

Guidelines and Laws Governing E-Commerce

- Guidelines for E-Commerce
- Commercial Laws Governing E-Commerce
- Special Laws governing E-Commerce

Guidelines and Laws Governing E-Commerce

Introduction

- **Commercial Laws Governing E-Commerce**
 - Income Tax Act, 1961
 - Companies Act, 2013
 - Foreign Trade (Development and Regulation) Act, 1992
 - The Factories Act, 1948
 - The Custom Act, 1962
 - The Goods and Services Tax (GST) Law

Guidelines and Laws Governing E-Commerce

Introduction

- **Commercial Laws Governing E-Commerce..2**
- Indian Contract Act,1872
- The Competition Act, 2002
- Foreign Exchange Management Act (FEMA 1999)
- Consumer Protection Act, 1986

Guidelines and Laws Governing E-Commerce

Introduction: Cases

CASE 1	
Event	Legal questions out of event
<p>Product ordered by 'A' delivered to 'B'. (For example: a DEO). 'A' had made payment online.</p>	<ol style="list-style-type: none"> 1. What if 'B' accepts the products and starts using? 2. 'A' had ordered the product to gift to spouse on his/her birthday. What of the mental agony caused? 3. The product is a medicine necessary of treatment of 'A's' dependent parents. In case of any complication to 'A's' parent due to delayed delivery who bears the additional medical costs? <p>Above is only an illustrative list. Imagine numerous possible combinations based on fact of in-correct delivery.</p>

Guidelines and Laws Governing E-Commerce

Introduction: Cases

CASE 2	
Event	Legal questions out of event
Service ordered by 'A' not provided by online vendor. For example: 'A' courier company does not collect an important document.	Who bears the loss that may be incurred by 'A' ?

Guidelines and Laws Governing E-Commerce

Introduction: Cases

CASE 3	
Event	Legal questions out of event
'A3. What is the legal liability of auction website sales in-advertently sales products which cannot be sold at all, or sale of those products is illegal. For example: Guns/ Narcotics Drugs.	<ol style="list-style-type: none">1. What is the legal liability if seller of products?2. What is legal liability of buyers of such products?3. What is the legal liability of auction website?

Guidelines and Laws Governing E-Commerce

Introduction: Cases

CASE 4	
Event	Legal questions out of event
'A' downloads a software from a server in USA. 'A' is in state of MP and then he sells the software to a person in Mumbai or Sells the same to another person in Singapore.	<ol style="list-style-type: none">1. Whether such a download is import?2. If 'A' re-exports can s/he claim benefits under customs?

Guidelines and Laws Governing E-Commerce

- Guidelines for E-Commerce
- Commercial Laws Governing E-Commerce
- Special Laws governing E-Commerce

Special Laws governing E-Commerce

- Information Technology Act, 2000
- Reserve Bank of India, 1934

Special Laws governing E-Commerce Information Technology Act, 2000

- Objectives
- Sections from Act

Special Laws governing E-Commerce Information Technology Act, 2000

- Objectives
- From Module

Special Laws governing E-Commerce Information Technology Act, 2000

- Section
- From Module

Special Laws governing E-Commerce Information Technology Act, 2000

- **Trends in E-Commerce**
- Content
- Social Commerce
- Mobile Commerce
- Bio-Metrics
- AI
- Predictive Analysis

Chapter 4: E-COMMERCE, M-COMMERCE AND EMERGING TECHNOLOGIES

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Chapter 4: E-COMMERCE, M-COMMERCE AND EMERGING TECHNOLOGIES

- Digital Payments
- Computing Technologies
- Case Studies

Digital Payments

- Introduction
- New Methods of Digital Payment
- Traditional Methods of Digital Payment
- Advantages of Digital Payments
- Drawbacks of Digital Payments

Digital Payments

New Methods of Digital Payment

- UPI Apps
- Immediate Payment Service (IMPS)
- Mobile Apps: BHIM (Bharat Interface for Money)
- Mobile Wallets
- Aadhar Enabled Payment Service(AEPS)
- Unstructured Supplementary Service Data(USSD)
- Mobile Banking
- Crypto Currency
- **Diagram from module**

Digital Payments

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- Traditional Methods of Digital Payment
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- Drawbacks of Digital Payments

Digital Payments

Traditional Methods of Digital Payment

- Cards
 - Credit Cards
 - Debits Cards
 - **Smart Cards**
- Internet Banking

Digital Payments

- Introduction
- New Methods of Digital Payment
- Traditional Methods of Digital Payment
- Advantages of Digital Payments
- Drawbacks of Digital Payments

Digital Payments

Advantages of Digital Payment

- Easy and convenient:
- Pay or send money from anywhere:
- Discounts from taxes:
- Written record:
- Less Risk:
- Competitive advantage to business
- Environment friendly

Digital Payments

- Introduction
- New Methods of Digital Payment
- Traditional Methods of Digital Payment
- Advantages of Digital Payments
- Drawbacks of Digital Payments

Digital Payments

Drawbacks of Digital Payment

- Difficult for a Non-technical person:
- The risk of data theft:
- Overspending:
- Disputed Transactions
- Increased business costs
- Need for internet access

Chapter 4: E-COMMERCE, M-COMMERCE AND EMERGING TECHNOLOGIES

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Chapter 4: E-COMMERCE, M-COMMERCE AND EMERGING TECHNOLOGIES

- Digital Payments
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- Case Studies

Computing Technologies

- Introduction
- Virtualization
- Grid Computing
- Cloud Computing
- Mobile Computing
- Green Computing
- Bring Your Own Device (BYOD)

Computing Technologies

- Web 3.0
- Internet of Things (IoT)
- Artificial Intelligence (AI)
- Machine Learning

Computing Technologies

Introduction

- One of the high-potential technologies is informatics. It is expected to revolutionize the value-additions to the huge information component, which is growing exponentially. Technological innovations in the field of storage, mining and services may be the key to address emerging challenges.

Computing Technologies

Virtualization

- Introduction
- Concept of Virtualization
- Application Areas of Virtualization
- Common Types of Virtualization

Computing Technologies

Virtualization:: Introduction

- **Virtualization** means to create a virtual version of a device or resource, such as a server, storage device, network or even an operating system.
- **Virtualization** refers to technologies designed to provide a layer of abstraction between computer hardware systems and the software running on them.
- **Virtualization** allows its' users to manipulate their systems' operating systems into thinking that a group of servers is a single pool of computing resources and conversely, allows its users to run multiple operating systems simultaneously on a single machine.

Computing Technologies

Virtualization:: **Concept**

- The core concept of Virtualization lies in Partitioning, which divides a single physical server into multiple logical servers.

Computing Technologies

Virtualization:: **Application Areas**

- Server Consolidation
- Disaster Recovery
- Testing and Training
- Portable Applications
- Portable Workspaces

Computing Technologies

Virtualization:: **Common Types**

- Hardware Virtualization
- Network Virtualization
- Storage Virtualization

Computing Technologies

- Introduction
- Virtualization
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Computing Technologies

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- Machine Learning

Computing Technologies

Grid Computing

- Introduction
- Benefits of Grid Computing
- Types of Resources
- Application Areas of Grid Computing
- Grid Computing Security

Computing Technologies

Grid Computing:: Introduction

- **Grid Computing** is a computer network in which each computer's resources are shared with every other computer in the system. It is a distributed architecture of large numbers of computers connected to solve a complex problem. In the grid computing model, servers or personal computers run independent tasks and are loosely linked by the Internet or low-speed networks.

Computing Technologies

Grid Computing:: **Benefits**

- Making use of Underutilized Resources
- Resource Balancing
- Parallel CPU Capacity
- Virtual resources and virtual organizations for collaboration
- Access to additional resources
- Reliability
- Management

Computing Technologies

Grid Computing:: **Benefits**

- Making use of Underutilized Resources:
- Resource Balancing:
- Parallel CPU Capacity:
- Virtual resources and virtual organizations for collaboration:
- Access to additional resources:
- Reliability:
- Management:

Computing Technologies

Grid Computing:: Type of Resources

- A grid is a collection of machines, sometimes referred to as nodes, resources, members, donors, clients, hosts and many other such terms. These include
 - Computation
 - Storage
 - Communications
 - Software and Licenses
 - Special equipment, capacities, architectures, and policies

Computing Technologies

Grid Computing:: Application Areas

- Civil engineers:
- An insurance company:
- An application service providers:
- An enterprise configures internal & external resources to support e-Business workload.
- Large-scale sci. and eng. are done through the interaction of people, heterogeneous computing resources, information systems.

Computing Technologies

Grid Computing:: **Security**

- Secured Single Sign-on
- Resource Management
- Data Management
- Management and Protection of Credentials
- Interoperability with local security solutions
- Standardization
- Exportability
- Support for secure group communication
- Support for multiple implementations

Computing Technologies

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Computing Technologies

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Computing Technologies

Cloud Computing

- Introduction
- Characteristics of Cloud Computing
- Advantages of Cloud Computing
- Drawbacks of Cloud Computing
- Cloud Computing Environment
- Cloud Computing Service Models
- Pertinent issues Related to Cloud Computing

Computing Technologies

Cloud Computing: Introduction

- To understand Cloud Computing, we first must understand what the cloud is. **“The Cloud”** refers to applications, services, and data storage on the Internet.
- You probably already use cloud computing in some forms. For example, if you access your e-mail via your web browser, you are using a form of cloud computing. If you use Google Drive’s applications, you are using cloud computing.

Computing Technologies

Cloud Computing: Introduction..2

- **Cloud Computing**, simply means the use of computing resources as a service through networks, typically the Internet.
- **Cloud Computing**, users can access database resources via the Internet from anywhere, for as long as they need.
- **Cloud Computing** is both, a combination of software and hardware based computing resources delivered as a networked service.
- **Cloud Computing** provides the facility to access shared resources and common infrastructure.

Computing Technologies

Cloud Computing: Introduction..3

- **Cloud Computing** allows Companies can scale up to massive capacities in an instant without having to invest in new infrastructure, train new personnel or license new software.
- **Cloud computing** is of benefit to small and medium-sized business systems. Pay for WHAT YOU USE model.

Computing Technologies

Cloud Computing: Characteristics..1

- Elasticity and Scalability
- Pay-per-Use
- On-demand
- Resiliency
- Multi Tenancy
- Workload Movement
- Wide range of Network Access Capabilities

Computing Technologies

Cloud Computing: Characteristics..2

- Minimize maintenance and licensing software
- Improved flexibility

Computing Technologies

Cloud Computing: Advantages...1

- Achieve economies of scale
- Reduce spending on technology infrastructure
- Globalize the workforce
- Streamline business processes
- Reduce capital costs
- Easy access to information / applications.
- Pervasive accessibility

Computing Technologies

Cloud Computing: Advantages...2

- Back-up and Recovery
- Monitor projects more effectively
- Less personal training needed
- Minimize maintenance costs
- Load balancing
- Improves flexibility

Computing Technologies

Cloud Computing: Drawback

- Internet connectivity necessary.
- Security is a major concern.
- Although Cloud computing supports scalability, it does not permit the control on these resources as these are not owned by the user or customer.
- Depending on the cloud vendor or provide, customers may have to face restrictions on the availability of applications, operating systems and infrastructure options.
- Interoperability is an issue.

Computing Technologies

Cloud Computing: Environment

- The Cloud Computing environment can consist of multiple types of clouds based on their deployment and usage. Such typical Cloud computing environments, catering to special requirements. It includes;;
 - Private Cloud
 - Public Cloud
 - Hybrid Cloud
 - Community Cloud

Computing Technologies

Cloud Computing: Environment

- Private Cloud
- Introduction
- Characteristics
- Advantages

Computing Technologies

Cloud Computing: Environment

- **Public Clouds**
- Introduction
- Characteristics
- Advantages

Computing Technologies

Cloud Computing: Environment

- Hybrid Clouds:
- Introduction
- Characteristics
- Advantages

Computing Technologies

Cloud Computing: Environment

- **Community Clouds:**
 - Introduction
 - Characteristics
 - Advantages

Computing Technologies

Cloud Computing: Service Model

- Introduction
- Infrastructure as a Service (IaaS)
- Platform as a Service (PaaS)
- Software as a Service (SaaS)
- Other Cloud Service Models

Computing Technologies

Cloud Computing: Service Model

- **Other Cloud Service Models**
- Communication as a Service (CaaS)
- Data as a Service (DaaS)
- Security as a Service (SECaaS)
- Identity as a Service (IDaaS)

Computing Technologies

Cloud Computing: Pertinent Issues...1

- Threshold Policy
- Interoperability
- Hidden Costs
- Unexpected Behavior
- Security Issues
- Legal Issues

Computing Technologies

Cloud Computing: Pertinent Issues...2

- Software development in cloud
- Bugs in large scale distributed system

Computing Technologies

- Introduction
- Virtualization
- Grid Computing
- Cloud Computing
- **Mobile Computing**
- Green Computing
- Bring Your Own Device (BYOD)

Computing Technologies

- Web 3.0
- Internet of Things (IoT)
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- Machine Learning

Computing Technologies

Mobile Computing

- Introduction
- Components
 - *Mobile Communication*
 - *Mobile Hardware*
 - *Mobile Software*
- Working
- Benefits
- Limitations

Computing Technologies

- Introduction
- Virtualization
- Grid Computing
- Cloud Computing
- Mobile Computing
- Green Computing
- Bring Your Own Device (BYOD)

Computing Technologies

- Web 3.0
- Internet of Things (IoT)
- Artificial Intelligence (AI)
- Machine Learning

Computing Technologies

Green Computing

- Introduction
- Best Practices
- Security Services and Challenges

Computing Technologies

- Introduction
- Virtualization
- Grid Computing
- Cloud Computing
- Mobile Computing
- Green Computing
- Bring Your Own Device (BYOD)

Computing Technologies

- Web 3.0
- Internet of Things (IoT)
- Artificial Intelligence (AI)
- Machine Learning

Computing Technologies Bring Your Own Device (BYOD)

- Introduction
- Advantages
- Emerging Threats

Computing Technologies

- Web 3.0
- Internet of Things (IoT)
- Artificial Intelligence (AI)
- Machine Learning

Computing Technologies

Web 3.0

- Introduction
- Underlying Concept
- Components
- **A new concept Web 4.0 called as “Intelligent Web”**

Computing Technologies

- Web 3.0
- Internet of Things (IoT)
- Artificial Intelligence (AI)
- Machine Learning

Computing Technologies

IOT

- Definition
- Future
- Applications
- Risks

Computing Technologies

- Web 3.0
- Internet of Things (IoT)
- Artificial Intelligence (AI)
- Machine Learning

Computing Technologies

Artificial Intelligence

- Definition
- Applications
- Risks
- Controls

Computing Technologies

- Web 3.0
- Internet of Things (IoT)
- Artificial Intelligence (AI)
- Machine Learning

Computing Technologies

Machine Learning

- Definition
- Applications
- Risk

Case Study:

- The nearby SNACK seller implemented a mobile based order booking and payment collection **app**. The process was as under:
 - User needs to get registered on **APP**. Mandatory details for registration includes: Name, Address for deliver, Mobile number and Email.
 - Users once registered shall be able to open the APP on their mobiles.
 - Select the products, Add products to cart.
 - Make payment through PayTM or Google Pay.
 - Get products delivered in 24 hours.

MCQ: CS: The case study is good example of, select the best option

- A. E-Commerce
 - B. BPA
 - C. M-Commerce
 - D. Internet Banking
-
- C. M-Commerce

CASE

The nearby SNACK seller implemented a mobile based order booking and payment collection **app**. The process was as under:

User needs to get registered on **APP**. Mandatory details for registration includes: Name, Address for deliver, Mobile number and Email.

Users once registered shall be able to open the APP on their mobiles.

Select the products, Add products to cart.

Make payment through PayTM or Google Pay.

Get products delivered in 24 hours.

MCQ: CS: The facts do not talk about USER authentication.
Suggest best, fastest and most cost effective technique that seller could use for user authentication.

- A. Make call to user
 - B. Send a person to address given by user.
 - C. Send OTP on Mobile / Email provided by user and ask user to submit for validation.
 - D. Send a physical letter to user and get a signed confirmation.
-
- C. OTP sending

CASE

The nearby SNACK seller implemented a mobile based order booking and payment collection **app**. The process was as under:

User needs to get registered on **APP**. Mandatory details for registration includes: Name, Address for deliver, Mobile number and Email.

Users once registered shall be able to open the APP on their mobiles.

Select the products, Add products to cart.

Make payment through PayTM or Google Pay.

Get products delivered in 24 hours.

MCQ: CS: The payment methods allowed by seller are classified as

- A. Banking Channel
 - B. E Wallet
 - C. Debit Card
 - D. AEPS
-
- B. E Wallet

CASE

The nearby SNACK seller implemented a mobile based order booking and payment collection **app**. The process was as under:

User needs to get registered on **APP**. Mandatory details for registration includes: Name, Address for deliver, Mobile number and Email.

Users once registered shall be able to open the APP on their mobiles.

Select the products, Add products to cart.

Make payment through PayTM or Google Pay.

Get products delivered in 24 hours.

MCQ: CS: The SNACK seller has been able to get 1000 customers registered. Identify the law governing the secrecy and privacy of customer data.

- A. Reserve Bank of India Act, 1934
 - B. Information Technology Act 2000 (As amended 2008)
 - C. Income Tax Act, 1961
 - D. The Customs Act, 1962
-
- B.

CASE

The nearby SNACK seller implemented a mobile based order booking and payment collection **app**. The process was as under:

User needs to get registered on **APP**. Mandatory details for registration includes: Name, Address for deliver, Mobile number and Email.

Users once registered shall be able to open the APP on their mobiles.

Select the products, Add products to cart.

Make payment through PayTM or Google Pay.

Get products delivered in 24 hours.

MCQ: CS: The SNACK seller has delivered inferior quality products. Customer can take recourse under which law.

- A. Reserve Bank of India Act, 1934
 - B. Information Technology Act 2000 (As amended 2008)
 - C. Consumer Protection Act, 1986
 - D. The Customs Act, 1962
-
- C.

CASE

The nearby SNACK seller implemented a mobile based order booking and payment collection **app**. The process was as under:

User needs to get registered on **APP**. Mandatory details for registration includes: Name, Address for deliver, Mobile number and Email.

Users once registered shall be able to open the APP on their mobiles.

Select the products, Add products to cart.

Make payment through PayTM or Google Pay.

Get products delivered in 24 hours.



THANK YOU