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CHAPTER 01
Multimedia and Desktop Publishing

1. What are the components of Multimedia?

Multimedia has five major components like text, images, sound, video and animation.

1. Text
   i. Static Text
   ii. Hypertext

2. Image
   i. Raster or Bitmap Images
   ii. Vector Images

3. Animation
   i. Path Animation
   ii. Frame Animation

4. Sound
   i. Musical Instrument Digital Identifier (MIDI)
   ii. Digital Audio

5. Video
   i. Analog Video

2. What are the File Formats for Multimedia?

1. Text Formats
   i. RTF
   ii. Plain text

2. Image Formats
   i. TIFF (Tagged Image File Format)
   ii. BMP (Bitmap)
   iii. DIB (Device Independent Bitmap)
   iv. GIF (Graphics Interchange Format)
   v. JPEG (Joint Photographic Experts Group)
   vi. TGA (Tagra)
   vii. PNG (Portable Network Graphics)

3. Digital Audio File Formats
   i. MP3 (MPEG Layer-3 Format)
   ii. OGG
   iii. AIFF (Audio Interchange File Format)
   iv. WMA (Windows Media Audio)
   v. RA (Real Audio Format)

4. Digital Video File Formats
   i. AVI (Audio/Video Interleave)
   ii. MPEG (Moving Picture Experts Group)

MULTIMEDIA PRODUCTION

3. Steps in Multimedia Production
1. Conceptual Analysis and Planning
2. Project design
3. Pre-production
4. Budgeting
5. Multimedia Production Team
6. Hardware/Software Selection
7. Defining the Content
8. Preparing the structure
9. Production
10. Testing
11. Documentation
12. Delivering the Multimedia Product

4. Multimedia Production Team
1. Production Manager
2. Content Specialist
3. Script Writer
4. Text Editor
5. Multimedia Architect
6. Computer Graphic Artist
7. Audio and Video Specialist
8. Computer Programmer
9. Web Master

5. Applications of Multimedia
1. Education
2. Entertainment
3. Business Systems
4. Medical Services
5. Public Places
6. Multimedia Conferencing

6. Libraries, InformationCenters and Archives
1. Multimedia Kiosk
2. Webcasting and Video Conferencing
3. User Orientation Program
4. In-house Production of Multimedia Resources and E-publishing
5. Digital Multimedia Libraries

CHAPTER 02
An Introduction to Adobe Pagemaker

1. Explain the tools in PageMaker toolbox.

Tool Box Usage			
Tool	**Toolbox**	**Cursor**	**Use**
Pointer Tool			Used to select, move, and resize text objects and graphics.
Text tool			Used to type, select, and edit text.
Rotating tool			Used to select and rotate objects.
Cropping tool			Used to trim imported graphics.
Line tool			Used to draw straight lines in any direction.
Constrained line tool			Used to draw vertical or horizontal lines.
Rectangle tool			Used to draw squares and rectangles.
Rectangle frame tool			Used to create rectangular placeholders for text and graphics.
Ellipse tool			Used to draw circles and ellipses.
Ellipse frame tool			Used to create elliptical placeholders for text and graphics.
Polygon tool			Used to draw polygons.
Polygon frame tool			Used to create polygonal placeholders for text and graphics.
Hand tool			Used to scroll the page (an alternative to the scroll bar)
Zoom tool			Used to magnify or reduce an area of the page.

CHAPTER 03

Introduction to Database Management System

1. Evolution of DBMS

1. Data Duplication
2. High Maintenance
3. Security

2. ACID Properties

Atomicity,

Consistency,

Isolation and

Durability.

3.DBMS Database Models:

1. Hierarchical Database Model
2. Network model

   #### 1. Network schema

   Schema defines all about the structure of the database.

   #### 2. Sub schema

   Controls on views of the database for the user

   #### 3. Language

   Basic procedural for accessing the database.

3. Relational model

   #### 1. Instance

   A table consisting of rows and columns

   #### 2. Schema

   ✓ Specifies the structure including name and type of each column.

   ✓ A relation (table) consists of unique attributes (columns) and tuples (rows).

4. Object-oriented database model

4. What are the features of RDBMS?

1. High Availability
2. High Performance
3. Robust Transactions and support
4. Ease of management
5. Less cost

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5. ER Modeling basic concepts

The basic concepts of ER model consists of

1. Entity or Entity type

   Types of Entity:

   1. Strong Entity

   2. Weak Entity

   3. Entity Instance

2. Attributes

3. Relationship

5. Attributes

An attribute is the information about that entity and it will describe, quantify, qualify,

classify, and specify an entity. An attribute will always have a single value, that value

can be a number or character or string.

Types of attributes:

1. Key Attribute

2. Simple Attributes

3. Composite Attributes

4. Single Valued Attribute

5. Multi Valued Attribute

6. Relationship Type

1. One-to-One relationship:

2. One-to-Many relationship

3. Many-to-Many relationship

7. Lists of commonly used databases.

1. DB2

2. MySQL

3. Oracle

4. PostgreSQL

5. SQLite

6. SQL Server

7. Sybase

8. Administrative MySQL Command

1. USE Database: This command is used to select the database in MySQL for working.

Syntax:

    mysql > use test;

    Database changed

    mysql>

    2. SHOW Databases: Lists all the databases available in the database server.

Syntax:

    mysql > show databases;

3. SHOW Tables: Lists all the tables available in the current database we are working in.

Syntax:

    mysql > show tables;

4. SHOW COLUMNS FROM tablename – Lists all the attributes, attribute type,

Syntax:

    mysql > show columns from sports;

5. SHOW INDEX FROM tablename – The query shows all the indexes for the given table.

Syntax:

    mysql > show indexes from sports;

6. SHOW TABLE STATUS LIKE tablename\G – This command provides with detailed report on the performance of the table.

9. MYSQL Administration open source software tools

Types of software tools

    1. **PhpMyAdmin** is most popular for Web Administration. The popular Desktop Application tools are **MySQL Workbench** and **HeidiSQL.**

10. Create Database

    The three major parts that forms a database are ***Tables, Queries and Views***

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11. Types of SQL Commands:

S.No	SQL Commands	Operations to be performed
1	Data Definition Language (DDL)	1. CREATE 2.ALTER 3.DROP 4. RENAME 5.TRUNCATE
2	Data Manipulation Language (DML)	1.INSERT 2.UPDATE 3.DELETE
3	Data Query Language (DQL)	1.SELECT
4	Transaction Control Language (TCL)	1.COMMIT 2.ROLLBACK 3. SET TRANSACTION 4. SAVE POINT
5	Data Control Language (DCL)	1.GRANT 2. REVOKE

CHAPTER 04

Introduction to Hypertext Pre-Processor

1. Client Server Architecture Model

    1.Single Tier Architecture

    2.Two Tier Architecture

    3.N/Multi/Three tire architecture

2. PHP Syntax

Three types of PHP Syntax are available. They are as follows

    1. Default Syntax

    2. Short open Tags

    3. HTML Script embed Tags

3. PHP Data Type

1. String

2. Integer

3. Float

4. Boolean

5. Array

6. Object

7. NULL

8. Resource

4. Operators in PHP

Operator is a symbol which is used to perform mathematical and logical operations in the programing languages. Different types of operator in PHP are:

1. Arithmetic operators,

2. Assignment operators,

3. Comparison operators,

4. Increment/Decrement operators,

5. Logical operators, and

6. String operators.

CHAPTER 05

PHP Function and Array.

1. Functions in PHP

A Function is a type of sub routine or procedure in a program.

The Function can be divided in to **three** types as follows

1. User defined Function,

2. Pre-defined or System or built-in

3. Function, and Parameterized Function.

2. Array in PHP

Array is a concept that stores more than one value of same data type (homogeneous) in single array variable. They are **3** types of array concepts in PHP.

1.Indexed Arrays,

2.Associative Array and

3.Multi-Dimensional Array.

CHAPTER 06

PHP Conditional Statements

1. PHP Conditional Statements:

Conditional statements are useful for writing decision making logics. It is most importantfeature of many programming languages, including PHP. They are implemented by the following types:

1. **if Statement**

If statement executes a statement or a group of statements if a specific condition is satisfied as per the user expectation.

Syntax:

```
if (condition)
{
Execute statement(s) if condition is true;
}
```

2. **if...else Statement**

If statement executes a statement or a group of statements if a specific condition is satisfied by the user expectation. When the condition gets false (fail) the else block is executed.

Syntax:

```
if (condition)
{
Execute statement(s) if condition is true;
}
else
{
Execute statement(s) if condition is false;
}
```

3. if...elseif....else Statement

If-elseif-else statement is a combination of if-else statement. More than one statement can execute the condition based on user needs.

Syntax:

```
if (1stcondition)
{
Execute statement(s) if condition is true;
}
```

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elseif(2ndcondition)

{

Execute statement(s) if 2ndcondition is true;

}

else

{

Execute statement(s) if both conditionsarefalse;

}

4. Switch Statement

The switch statement is used to perform different actions based on different conditions.

Syntax:

switch (n)

{

case label **1**:

code to be executed if n=label1;

break;

case label **2:**

code to be executed if n=label2;

break;

case label **3**:

code to be executed if n=label3;

break;

...

default:

code to be executed if n is different from all labels;

}

CHAPTER 07

Looping Structure

1. Looping Structure:

Looping Structures are useful for writing iteration logics. It is the most important feature ofmany programming languages, including PHP. They are implemented using the following categories.

1. for Loop

For loop is an important functional looping system which is used for iteration logics when the programmer know in advance how many times the loop should run.

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Syntax:

```
for (init counter; test counter; increment counter)
{
code to be executed;
}
```

2.foreach Loop

foreach loop is exclusively available in PHP. It works only with arrays. The loop iteration deepens on each KEY Value pair in the Array

Syntax:

```
for each ($array as $value)
{
code to be executed;
}
```

3.while Loop

While loop is an important feature which is used for simple iteration logics. It is checking the condition whether true or false. It executes the loop if specified condition is true.

Syntax:

```
while (condition is true)
{
code to be executed;
}
```

4.do While Loop

Do while loop always run the statement inside of the loop block at the first time execution. Then it is checking the condition whether true or false. It executes the loop, if the specified condition is true.

Syntax:

```
do
 {
code to be executed;
 } while (condition is true);
```

CHAPTER 08

Forms and Files

1. Basic HTML Form Controls

The following control types are available in HTML form controlling:

    1.Text inputs

    2.Buttons

    3.Checkbox

    4.Radio box

    5.File Select

    6.Form Tag

2. PHP Basic Form HandlingMethods:

    1. Post Method: The input data sent to the server with POST method is stored in the request body of the client's HTTP request.

    2.Get Method: The input data sent to the server with POST method via URL address is known as query string. All input data are visible by user after they clicks the submit button.

3. Basic PHP Form Validation

    1. Client-Side Validation

    2. Server Side Validation

4. Files

    File handling is an important activity of all web application development process. Files are processed for different tasks using the following events:

    1. PHP Open a File,

    2. PHP Read a File,

    3. PHP Close a File,

    4. PHP Write a File,

    5. PHP Appending a File and

    6. PHP uploading a File.

CHAPTER 09

Connecting PHP and MYSQL

1. MySQL Function in PHP

The MySQLi extension contains the following important functions which are related to

MySQL database connectivity and management.

1. Mysqli_connect() Function
2. Mysqli_close() Function
3. mysqli_select_db() Function
4. mysqli_affected_rows() Function
5. mysqli_connect_error() Function
6. **mysqli_fetch_assoc() Function**

2. Database Connections:

1. Managing Database Connections

2. Performing Queries

3. Closing Connection:

CHAPTER 10

Introduction to Computer Networks

1.History of Computer Networking and the Internet

S. No	Period	Method History
1	Late 1950	SAGE (Semi – Automatic Ground Environment)
2	1960	SABRE(Semi Automatic Business Research Environment)
3	1963	Intergalactic Computer network Intergalactic Computer network
4	1965	Telephone switch At first widely used Telephone switch was introduced
5	1966	WAN (Wide Area Network)
6	1969-1970	ARPANET (Hierarchical routing after 1970's Internet today)
7	1972 X.25	TCP/IP
8	1973	Hosts
9	1973-1979	Ethernet
10	1976	ARCNET
11	1995	NEW FIBRE OPTIC CABLES

2. The common uses of computer network are

1. Communication

2. Resource sharing

3. Data (or) software sharing

4. Money saving

3. What are the ways networks can be connected?

Networks at home are connected in *two* ways they are

1. Wired network

2. Wireless network

4. Social Application

1. Membership.

2. Content contribution.

3. Frequent return visits.

4. Human relationship building.

5. Usefulness of Social Networks

1. Group information sharing over long distances.

2. Broadcast announcements.

3. Fostering diversity of thought

CHAPTER 11

Network Examples and Protocols

Network Applications

Application of Internet.	Application of Intranet	Application of Extranet
• Download programs and files	• Sharing of company policies/rules and regulations	• Customer communications
• Social media	• Access employee database	• Online education/ training
• E-Mail	• Distribution of circulars/ Office Orders	• Account status enquiry
• E-Banking	• Access product and customer data	• Inventory enquiry
• Audio and Video Conferencing	• Sharing of information of common interest	• Online discussion
• E-Commerce	• Launching of personal/ departmental home pages	• Supply – chain managements
• File Sharing	• Submission of reports	• Order status enquiry
• E- Governance	• Corporate telephone directories.	• Warranty registration
• Information browsing		• Claims
• Search the web addresses for access through search engine		• Distributor promotions
• Chatting and etc		

1. What are the generations of mobile networks?

The generations of mobile networks are as follows.

1. First Generation(1G) 1981- **NMT** launch
2. Second Generation(2G) 1991-**GSM** Launch
3. Second to Third Generation Bridge (2.5)2000 – **GPRS** launch
4. Third Generation(3G) 2003- **UK 3G** launch
5. Fourth Generation (4 G) 2007
6. Fifth Generation (5G) 2019+

2. What are the types of RFID tags?

Two types of RFID tags were Active RFID and Passive RFID systems.

1. *Passive RFID* tag will be used the reader radio wave energy to really its stored information back to the reader.

2. *Battery powered RFID* tag is installed with small battery that powers the broadcast of information

Two types of RFID Systems:

1. *Active RFID system:* the tag has its own power source. These systems used for larger distances and to track high value goods like vehicles.

2. *Passive RFID system*: the tag gets power through power from a reader antenna to the tag antenna. They are used for shorter range transmission.

3. Explain OSI Model.

1. Physical Layer: This is the 1st layer, it defines the electrical and physical specifications for devices.

2. Data Link Layer: It is the 2nd layer a nd it guarantees that the data transmitted are free of errors. This layer has simple protocols like "802.3 for Ethernet" and "802.11 for Wi-Fi".

3. Network Layer: It is the 3rd layer determining the path of the data packets. At this layer, routing of data packets is found using **IP Addressing**.

4. Transport Layer: It is the 4th layer that guarantees the transportation/sending of data is successful. It includes the error checking operation.

5. Session Layer: It is the 5th layer, identifies the established system session between different network computers .For instance, while accessing a system remotely, session is created between your computer and the remote system.

6. Presentation Layer: It is the 6th layer that does the translation of data to the next layer (Prepare the data to the Application Layer). Encryption and decryption protocols occur in this layer such as, Secure Socket Layer (SSL).

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7. Application Layer: It is the 7th layer, which acts as the user interface platform comprising of software within the system.

	OSI Layer	TCP/IP	Datagrams are called
Software	Layer 7 Application	HTTP, SMTP, IMAP, SNMP, POP3, FTP	Upper Layer Data
	Layer 6 Presentation	ASCII Characters, MPEG, SSL, TSL, Compression (Encryption & Decryption)	
	Layer 5 Session	NetBIOS, SAP, Handshaking connection	
	Layer 4 Transport	TCP, UDP	Segment
	Layer 3 Network	IPv4, IPv6, ICMP, IPSec, MPLS, ARP	Packet
Hardware	Layer 2 Data Link	Ethernet, 802.1x, PPP, ATM, Fiber Channel, MPLS, FDDI, MAC Addresses	Frame
	Layer 1 Physical	Cables, Connectors, Hubs (DLS, RS232, 10BaseT, 100BaseTX, ISDN, T1)	Bits

2. What are the Frequent TCP/IP Protocols?

1.HTTP – It is used between a web client and a web server and it guarantees non-secure data transmissions.

2.HTTPS – It is used between a web client and a web server ensures secure data transmissions.

3.FTP – It is used between computers for sending and receiving file

3. What are The Different Layers of TCP/IP?

There are _four_ total layers of TCP/IP protocol, each of which is listed below with a brief description.

1.Network Access Layer – concerned with building packets.

2.Internet Layer - describes how packets are to be delivered.

3.Transport Layer - ensure the proper transmission of data.

4.Application Layer – application network processes. These processes include File Transfer Protocol (FTP), Hypertext Transfer Protocol (HTTP), and Simple Mail Transfer Protocol (SMTP).

TCP/IP MODEL	OSI MODEL
Application Layer	Application Layer
	Presentation Layer
	Session Layer
Transport Layer	Transport Layer
Internet Layer	Network Layer
	Data Link Layer
Network Access Layer	Physical Layer

TCP/IP Layers	TCP/IP Prototocols				
Application Layer	HTTP	FTP	Telnet	SMTP	DMS
Transport Layer	TCP			UDP	
Network Layer	IP		ARP	ICMP	IGMP
Network Interface Layer	Ethernet		Token ring	Other link-layer protaocols	

CHAPTER 12

DNS (Domain Name System)

1. What are the types of IP Address?

IP address is a logical address used to uniquely identify a computer over the network. There are two types: IPv4 and IPv6.

1. **IPv4:** IPv4 address is a 32 bit unique address given to a computer or a device.
   There are two ways to represent the IP address: Binary notation, Dotted-decimal notation.

2. **IPv6:** IPv6 address is a 128 bit unique address given to a computer or a device. It follows Hexadecimal number notation.

2. What are the URL Types?

Depending on the location of the document the URL is divided into 2 types

1. **Absolute URL**
2. **Relative URL**

3. What are the DNS Components?

There are three important components in the Domain Name System. They are

1. Namespace
2. Name server
3. Zone

4. What are the Types of Name Servers?

There are **Three** types of Name Servers which control the entire Domain Name System:

1. Root Name Server - Top level server
2. Primary/Master Name Server
3. Secondary/Slave Name Server

CHAPTER 13

Network Cabling

1. What are the types of network cables?

1. Coaxial Cables

2. Twisted Pair Cables

3. Fiber Optics

4. USB Cables

5. Serial and Parallel cables

6. Ethernet Cables

2. What are the Ethernet cabling component?

1. Patch Cable (Twisted pair)

2. RJ45 Connector

3. Ethernet Ports

4. Crimping Tool.

3. What are the Types of Jacks?

The commonly known registered jacks are

1. RJ-11,
2. RJ-45,
3. RJ-21, and
4. RJ-28.

4. What are the Ethernet Cable Color Coding Techniques?

There are three types of wiring techniques to construct the Ethernet cable. It is also known as color coding techniques. They are

1. Straight-Through Wiring
2. Cross-over Wiring
3. Roll-over Wiring

CHAPTER 14

Open Source Concepts

1. What are the Organizations related to Open Source?

1. Apache Software Foundation
2. The Document Foundation
3. The Eclipse Foundation
4. Free Software Foundation
5. Linux Foundation
6. OpenCourseWare Consortium
7. Open Source Initiative

2. What are the types of Types of open source license?

1. Apache License 2.0
2. BSD 3-Clause "New" or "Revised" license
3. BSD 2-Clause "Simplified" or "FreeBSD" license
4. GNU General Public License (GPL)
5. GNU Library or "Lesser" General Public License (LGPL)
6. MIT license
7. Mozilla Public License 2.0
8. Common Development and Distribution License
9. Eclipse Public License

3. Write an Example of open source Application software.

NS2 ,	OPEN NMS,
Ubuntu ,	MySQL,
PDF Creator,	Open Office,
7zip	GNUCASH,
GIMP,	BLENDER,
AUDACITY,	VLC,
MOZILA FIREFOX,	MAGENTO,
ANDROID, PHP	Open Source Hardware

4. List few Open Source Hardwares?

1. Remix
2. Remake
3. Remanufacture
4. Redistribute
5. Resell
6. Study and Learn

CHAPTER 15

E-Commerce

1. The Development and Growth of Electronic Commerce?

1. The First Wave of Electronic Commerce: 1995 -2003
2. The Second Wave of Electronic Commerce: 2004 – 2009
3. The Third Wave of Electronic Commerce: 2010 – Present

2. What are the lassification of E-Commerce Business models?

1. Business to Business (B2B)
2. Business to Consumer (B2C)
3. Business to Government (B2G)
4. Consumer to Business (C2B)
5. Consumer to Consumer (C2C)
6. Consumer to Government (C2G)
7. Government to Business (G2B)
8. Government to Consumer (G2C)
9. Government to Government (G2G)

3. What are the E-Commerce Revenue Models?

Apart from regular selling of commodities, today there are many other ways by which companies can make money from the Internet. The other forms of E-Commerce activities are:

1. Affiliate site is a form of third party marketing in which the site owner get paid based on the performance.

2.Auction site is a kind of website, that auctions items on the Internet and levies some commission from the sales. *e.g. https://www.ebay.com/*

3. Banner advertisement site displays advertisements of other companies in its websites and thereby earns revenue.

4. Bulk-buying sites collect a number of users together all of who want to buy similar items; the site negotiates a discount with the supplier and takes a commission. *e.g. https://www.alibaba.com/*

5. Digital publishing sites effectively host the e-books or magazines on the web. They make profits in a number of ways such as advertising, selling etc., https://wordpress.org/

6. Licensing sites allow other websites to make use of their software. For example, the search engines which allow a visitor of the site to search within the website more easily.

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        7. Name-your-price sites are just like normal retail sites. In contrast, the buyer negotiates with the retailer for a particular product or service. https://in.hotels.com/

        8. Online Shopping mall site allows multi E-Commerce traders to assemble together on a single website. Often these sellers would be related to each other, for example they may all sell luxury goods. This site would take a percentage of their profit.

3. What are the differences between Traditional commerce and E-Commerce?

Table 15.1 Traditional vs E-Commerce

Traditional Commerce	E-Commerce
Traditional commerce is buying or selling of products and services physically.	E-Commerce carries out commercial transactions electronically on the Internet.
Customer can easily identify, authenticate and talk to the merchant.	Neither customer nor merchant see the other.
Physical stores are not feasible to be open all the time.	It is always available on all time and all days of the year.
Products can be inspected physically before purchase.	Products can't be inspected physically before purchase.
Scope of business is limited to particular area.	Scope of business is global. Vendors can expand their business Worldwide.
Resource focus Supply side.	Resource focus Demand side.
Business Relationship is Linear.	Business Relationship is End-to-end.
Marketing is one way marketing.	One-to-one marketing.
Payment is made by cash, cheque, cards etc.	Payment system is mostly credit card and through fund transfer.
Most goods are delivered instantly.	It takes time to transport goods.

CHAPTER 16

Electronic Payment Systems

1. What are the Classification of Electronic Payment methods?

       1. Micro electronic Payment Systems

       2. Macro electronic Payment Systems

2. Card Based Payments Systems

Based on the transaction settlement method there are three widely used card based payment systems. They are

       1. Credit card based payment systems (pay later)

       2. Debit card based payment systems (pay now)

          Currently there are three ways of processing debit card transactions:

             1. EFTPOS (also known as online debit or PIN debit)

             2. Offline debit (also known as signature debit)

       3. Electronic Purse Card System

       4. Stored value card based payment systems (pay before)

          1. Closed loop (single purpose)

          2. Open loop (multipurpose)

3. What are the Smart card types?

     1. Contact smart cards

     2. Contactless smart cards

4.What are the types of Electronic Clearing Services (ECS)?

       1. ECS credit

       2. ECS debit

5. What are the types of Electronic Funds Transfer ?

1. Real Time Gross Settlement:

       Real-time gross settlement transactions are:

          ✓ Unconditional
          ✓ Irrevocable

6. What are the Electronic Cash Payment Systems?

       1. Bitcoin

       2. Altcoins

       3. Mining

       4. Blockchain

7. How the Mobile Banking operations can be implemented?

1. Contacting the call center.

2. Automatic IVR telephone service.using a mobile phone via SMS.

3. WAP technology.

4. Using smartphone applications.

CHAPTER 17

E-Commerce Security Systems

1. What are the Types of E-Commerce Threats?

1. Information leakage

2. Tampering

3. Payment frauds

4. Malicious code threats

5. Distributed Denial of Service (DDoS) Attacks

6. Cyber Squatting

7. Typopiracy
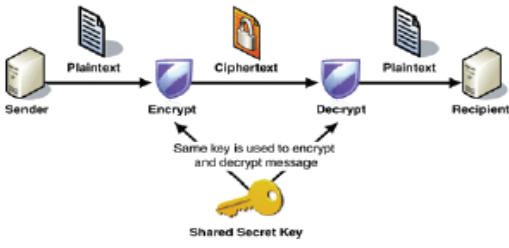
2. What are the Dimensions of E-Commerce security?
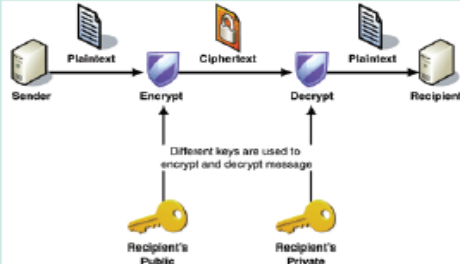
1. Authenticity: Conforming genuineness of data shared.

2. Availability: Prevention against data delay or removal.

*3.Completeness: U*nification of all business information.

*4. Confidentiality: P*rotecting data against unauthorized disclosure.

5. Effectiveness: Effective handling of hardware, software and data.

6.Integrity: Prevention of the data being unaltered or modified.

7.Non-repudiation: Prevention against violation agreement after the deal.

8 Privacy: Prevention of customers'personal data being used by others.

9.Reliability: Providing a reliable identification of the individuals or businesses.

10.Review ability: Capability of monitoring activities to audit and track the operations.

3. What are the Security technologies in E-Commerce transaction?

1. Encryption technology

2. Authentication technology

3. Authentication protocols

Authentication Technology

4. What are the difference between Symmetric key Encrpytion and Asymmetric key Encrpytion

Symmetric Key Encryption	Asymmetric Key Encryption
Same key is used for both encryption and decryption	Different keys are used for encryption and decryption
Speed of encryption or decryption is very fast	Speed of encryption or decryption is comparatively slow
Plain text and cipher text are of same size	The size of cipher text is always greater than plain text.
Algorithms like DES, AES, RC4 uses symmetric key encryption	Algorithms like RSA, ECC, DSA use asymmetric key encryption
Provides confidentiality	Provides confidentiality, authenticity and non-repudiation
The number of key used grows exponentially with the number of users	The number of key used grows linearly with the number of users

4. What are the difference between Digital Signature and Digital Certificate?

Digital signature	Digital certificate
A digital signature is a mechanism that is used to verify that a particular digital document, message or transaction is authentic.	A digital certificate is a computer file which officially approves the relation between the holder of the certificate and a particular public key.
Digital signatures are used to verify the trustworthiness of the data being sent	Digital certificates are used to verify the trustworthiness of the sender.
Digital signature is to ensure that a data remain secure from the point it was issuedand it was not modified by a third party.	Digital certificate binds a digital signature to an entity
It provides authentication, non-repudiation and integrity	It provides authentication and security.
A digital signature is created using a Digital Signature Standard (DSS). It uses a SHA-1 or SHA-2 algorithm for encrypting and decrypting the message.	A digital certificate works on the principles of public key cryptography standards (PKCS). It creates certificate in the X.509 or PGP format.
The document is encrypted at the sending end and decrypted at the receiving end using asymmetric keys.	A digital certificate consist of certificate's owner name and public key, expiration date, a Certificate Authority 's name , a Certificate Authority's digital signature

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5. What are the Authentication protocols?

At present, there are two kinds of security authentication protocols widely used in E-Commerce, namely

1. Secure Electronic Transaction **(SET)**   and   2. Secure Sockets Layer **(SSL).**

6. Write short note on: 3D Secure

"3-D Secure is a secure payment protocol on the Internet. It was developed by Visa to increase the level of transaction security, and it has been adapted by MasterCard.

This authentication model comprise 3 domains (hence the name 3D) which are:

1. The Acquirer Domain

2. The Issuer Domain

3. The interoperability Domain

CHAPTER 18
Electronic Data Interchange- EDI

1. What are EDI Types?

The types of EDI were constructed based on how EDI communication connections and the conversion were organized. Thus based on the medium used for transmitting EDI documents the following are the major EDI types.

1. Direct EDI
2. EDI via VAN
3. EDI via FTP/VPN, SFTP, FTPS
4. Web EDI
5. Mobile EDI

2. What are the EDI Layers?

Electronic data interchange architecture specifies four different layers namely

1. Semantic layer
2. Standards translation layer
3. Transport layer
4. Physical layer

3. What are the EDI Components?

There are *four* major components of EDI. They are

1. Standard document format
2. Translator and Mapper
3. Communication software
4. Communication network
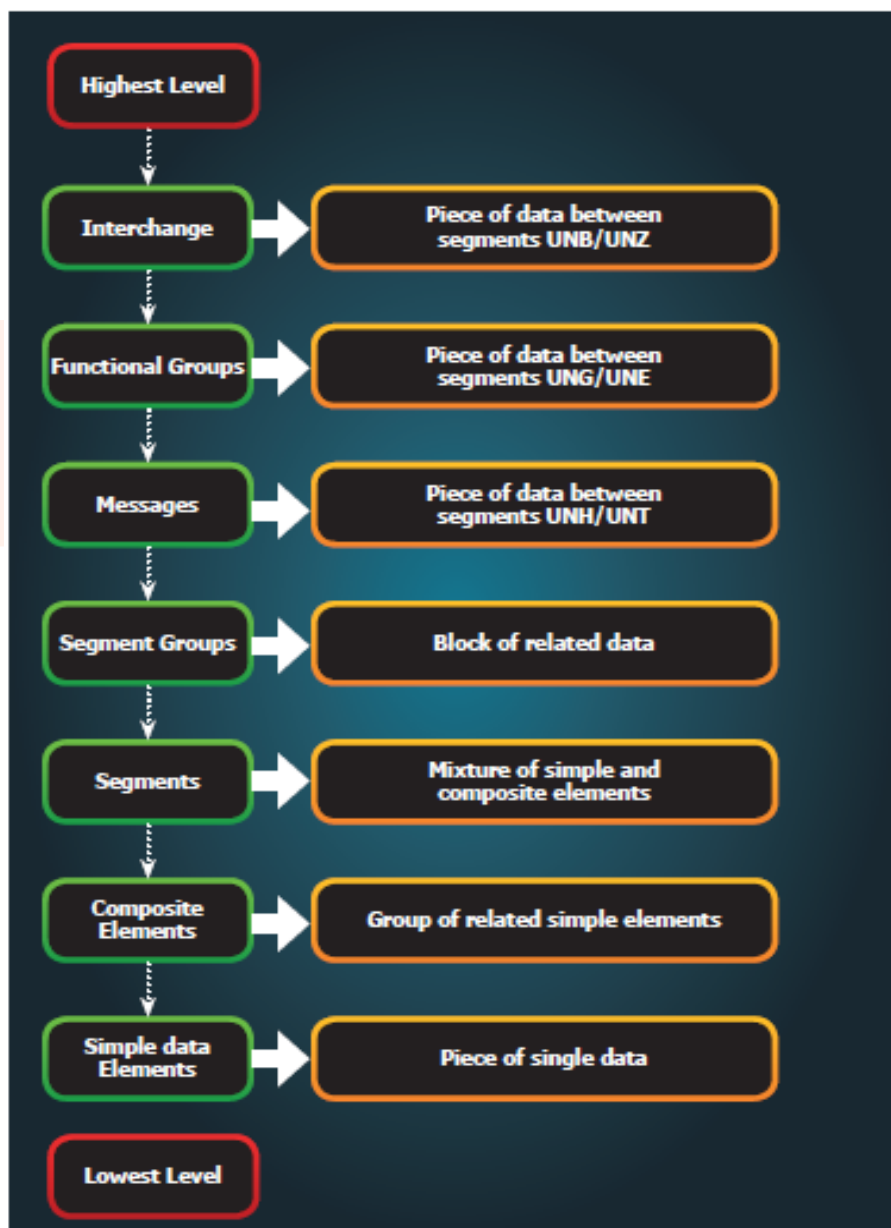
4. What are the EDIFACT subsets?

Due to the complexity, branch-specific subsets of EDIFACT have developed. These subsets of EDIFACT include only the functions relevant to specific user groups.

Example:

CEFIC - Chemical industry

EDIFURN - furniture industry

EDIGAS - gas business

5. Explain UN/EDIFACT Message structure

Highest Level

Interchange → Piece of data between segments UNB/UNZ

Functional Groups → Piece of data between segments UNG/UNE

Messages → Piece of data between segments UNH/UNT

Segment Groups → Block of related data

Segments → Mixture of simple and composite elements

Composite Elements → Group of related simple elements

Simple data Elements → Piece of single data

Lowest Level

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6. Write a note on EDIFACT message.

Service messages

To confirm / reject a message, CONTRL

and APERAK messages are sent.

CONTRL- Syntax Check and

Confirmation of Arrival of Message

APERAK - Technical error

messages and acknowledgment

Data exchange

CREMUL - multiple credit advice

DELFOR- Delivery forecast

IFTMBC - Booking confirmation

7. UN/EDIFACT

United **N**ations /

Electronic **D**ata **I**nterchange **F**or **A**dministration, **C**ommerce and **T**ransport (UN / EDIFACT)

is an international EDI - standard developed under the supervision of the United Nations..

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All the best !!!

Bring out your best !!!

Wish you all get centum in public examination….

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