

Department of Business Administration
Study Material
E-COMMERCE

UNIT-I

INTRODUCTION TO E-COMMERCE: E-commerce (Electronic Commerce) refers to buying and selling goods and services using the internet or electronic networks. E-commerce means conducting **business transactions online** instead of in physical stores.

Key Features

- Online transactions (no physical presence needed)
- Global reach
- 24/7 availability
- Reduced operational cost
- Fast communication & delivery

Types of E-Commerce

- **B2B (Business to Business) – B2B (Business to Business)** is a type of e-commerce where **transactions take place between one business and another business.**, B2B refers to the buying and selling of goods and services between two or more businesses through electronic platforms.e.g., wholesale suppliers
- **B2C (Business to Consumer) – B2C (Business to Consumer)** is a type of e-commerce where **businesses sell goods or services directly to individual customers, B2C refers to electronic transactions in which a business sells products or services directly to the end consumer.**e.g., Amazon
- **C2C (Consumer to Consumer) – C2C (Consumer to Consumer)** is a type of e-commerce where **individual consumers sell goods or services directly to other consumers.**, C2C refers to electronic transactions in which one consumer sells products or services to another consumer through an online platform.e.g., OLX
- **C2B (Consumer to Business) – C2B (Consumer to Business)** is a type of e-commerce where **individual consumers offer products or services to businesses.** C2B refers to electronic transactions in which consumers provide goods or services to businesses, usually in exchange for payment.freelancing platforms

SCOPE OF E-COMMERCE : E-commerce has a wide and growing scope:

- Online retail (fashion, electronics, groceries)
- Digital payments & fintech
- Online education (EdTech)
- Healthcare (telemedicine, e-pharmacy)
- Travel & ticket booking
- Digital marketing & advertising

Future Scope

- AI-driven shopping : **AI-driven shopping** uses Artificial Intelligence to improve the online shopping experience.
- Voice commerce : **Voice commerce** allows users to shop online using voice commands.
- Global expansion for small businesses : E-commerce enables small businesses to reach international markets.

E-COMMERCE BASED ACTIVITIES

- Online buying & selling
- Electronic payments (UPI, cards, wallets)
- Online banking
- Digital marketing (SEO, social media ads)
- Supply chain & inventory management
- Customer support (chatbots, email)

TECHNICAL COMPONENTS OF E-COMMERCE

- 1. Hardware** : Servers, computers, mobile devices
- 2. Software** : Websites, mobile apps, payment systems
- 3. Network Infrastructure** : Internet, intranet, extranet
- 4. Database Systems** : Customer data, product info, transactions
- 5. Security Systems** : Encryption (SSL), Firewalls, Authentication systems

E-COMMERCE APPLICATIONS

- Online shopping platforms
- E-banking & mobile banking
- Online ticket booking
- E-learning platforms
- Online auctions
- Digital content streaming

FRAMEWORK OF E-COMMERCE : The framework includes:

1. Infrastructure

- Internet, telecom, hardware

2. Services

- Payment gateways
- Logistics & delivery

3. Business Applications

- Online stores, marketplaces

4. Legal & Policy Framework

- Cyber laws
- Data protection
- Consumer rights

SUPPLY CHAIN MANAGEMENT (SCM) IN E-COMMERCE : SCM refers to managing the flow of goods from supplier to customer.

Key Stages

1. Procurement (raw materials)
2. Production
3. Warehousing
4. Distribution
5. Delivery

Importance in E-Commerce

- Faster delivery
- Inventory optimization

- Cost reduction
- Better customer satisfaction

E-BUSINESS : E-business is broader than e-commerce.

It includes all business activities conducted online:

- Internal processes (HR, finance)
- Customer relationship management (CRM)
- Supply chain management

Difference:

- E-commerce = Buying & selling
- E-business = Entire business operations online

M-COMMERCE (Mobile Commerce)

M-commerce is e-commerce conducted through mobile devices.

Examples

- Mobile banking apps
- Shopping apps
- UPI payments
- Food delivery apps

Features

- Convenience
- Location-based services
- Instant transactions

Unit II

PLANNING ONLINE BUSINESS

Planning an online business involves creating a roadmap for starting and managing digital operations.

Steps in Planning

- 1. Idea Generation**
 - Identify product/service
 - Market demand analysis
- 2. Market Research**
 - Target audience
 - Competitor analysis
- 3. Business Model Selection**
 - B2B, B2C, etc.
- 4. Revenue Model**
 - Sales, subscription, ads, commission
- 5. Legal Requirements**
 - Registration, GST, licenses
- 6. Technology Planning**
 - Website, app, payment gateway
- 7. Marketing Strategy**
 - SEO, social media, ads

NATURE AND DYNAMICS OF INTERNET

Nature of Internet

- Global network of interconnected computers
- Decentralized (no single authority)
- Open and accessible
- Real-time communication

Dynamics (Changing Nature)

- Rapid technological growth
- Increasing mobile usage
- Rise of AI and automation
- Cybersecurity challenges
- Changing user behavior (short attention spans, visual content)

ELECTRONIC BUSINESS MODELS

1. B2B (Business to Business)

- Transactions between businesses, Example: Manufacturers selling to wholesalers

2. B2C (Business to Consumer)

- Businesses sell directly to customers, Example: Online shopping websites

3. C2C (Consumer to Consumer)

- Individuals sell to individuals, Example: OLX, resale platforms

4. C2B (Consumer to Business)

- Individuals offer services to companies, Example: Freelancers, influencers

5. B2G (Business to Government)

- Businesses provide goods/services to government, Example: Tender-based contracts

WEBSITE DESIGNING

Website designing focuses on the look, feel, and usability of a website.

Key Elements

- Layout (structure of pages)
- Color scheme
- Fonts & typography
- Images and graphics
- Navigation (menus, buttons)

Principles of Good Design

- Simple and clean
- Mobile-friendly (responsive)
- Fast loading
- Easy navigation
- User-friendly interface (UI/UX)

ASSESSING REQUIREMENTS FOR AN ONLINE BUSINESS

Before starting, businesses must analyze requirements:

1. Business Requirements

- Type of product/service
- Target market

2. Technical Requirements

- Website or mobile app
- Hosting and domain
- Payment gateway

3. Financial Requirements

- Initial investment
- Operational cost

4. Human Resources

- Developers
- Designers
- Marketing team

5. Legal Requirements

- Privacy policy
- Terms & conditions
- Tax compliance

DESIGNING THE SYSTEM

System design means planning how the website/app will function.

Components

- User Interface (UI)
- Database design
- System architecture
- Security features

Types of Design

- **Logical Design:** Flow of data and processes
- **Physical Design:** Actual implementation (hardware/software)

DEVELOPING THE SYSTEM: This is the actual building phase.

Steps in Development

1. **Front-End Development:** What users see (HTML, CSS, JavaScript)
2. **Back-End Development:** Server, database, logic (PHP, Python, etc.)
3. **Database Development:** Storing user and product data
4. **Integration:** Payment gateway, APIs
5. **Testing:** Bug fixing, performance testing
6. **Deployment:** Launching the website

UNIT III

OPERATIONS OF E-COMMERCE

E-commerce operations refer to all activities involved in running an online business.

Key Operations

1. **Order Management:** Receiving and processing orders
2. **Inventory Management:** Stock tracking and updates
3. **Payment Processing:** Handling online transactions
4. **Logistics & Delivery:** Shipping and order fulfillment
5. **Customer Service:** Handling queries, returns, complaints
6. **Marketing & Sales:** Promotions, ads, offers

Goal

- Smooth workflow
- Fast delivery
- Customer satisfaction

ONLINE PAYMENT MECHANISM

Online payment mechanism refers to the process of paying electronically over the internet.

Steps in Online Payment

1. Customer selects product
2. Chooses payment method
3. Enters payment details
4. Payment gateway processes request
5. Bank approves/rejects transaction
6. Confirmation sent to user

Features

- Fast and convenient
- Secure (encryption)
- Real-time processing

ELECTRONIC PAYMENT SYSTEM (EPS)

EPS is a system that enables digital transfer of money.

Types of EPS

- **Credit Cards**
- **Debit Cards**
- **Net Banking**
- **UPI (Unified Payments Interface)**
- **Mobile Wallets** (Paytm, PhonePe)
- **Smart Cards**

Advantages

- Speed
- Convenience
- Global transactions

Disadvantages

- Risk of fraud
- Technical issues
- Dependency on internet

PAYMENT GATEWAYS : A payment gateway is a service that authorizes and processes online payments.

Functions

- Encrypts payment data
- Connects website to bank
- Verifies transaction
- Approves or declines payment

Process Flow

Customer → Website → Payment Gateway → Bank → Approval → Confirmation

Features

- Security (SSL encryption)
- Fraud detection
- Multi-payment support

VISITORS TO WEBSITE : Visitors are users who access a website.

Types of Visitors

- **New Visitors** – First-time users
- **Returning Visitors** – Repeat users
- **Unique Visitors** – Counted once per session

Visitor Behavior Metrics

- Page views
- Bounce rate
- Session duration
- Conversion rate

Importance

- Helps analyze performance
- Improves marketing strategies

TOOLS FOR PROMOTING WEBSITES

- 1. Search Engine Optimization (SEO)** : Improves ranking on search engines
- 2. Social Media Marketing** : Instagram, Facebook, LinkedIn
- 3. Email Marketing** : Newsletters, promotions
- 4. Pay-Per-Click (PPC)** : Paid ads (Google Ads)
- 5. Content Marketing** : Blogs, videos, reels
- 6. Affiliate Marketing** : Commission-based promotion

RISK MANAGEMENT IN E-COMMERCE : Risk management involves identifying and reducing risks in online business.

Types of Risks

- 1. Security Risks** : Hacking, data theft
- 2. Financial Risks** : Payment fraud
- 3. Operational Risks** : Delivery failures
- 4. Legal Risks** : Non-compliance with laws

Risk Management Options

- SSL encryption
- Secure payment gateways
- Two-factor authentication (2FA)
- Regular backups
- Fraud detection systems
- Legal compliance (privacy policy, terms)

E-PAYMENT SYSTEM (DETAILED VIEW) : E-payment system = broader concept covering all digital payments.

□ Components

- Customer
- Merchant (website)
- Payment gateway
- Bank

UNIT IV

SECURITY AND LEGAL ASPECTS OF E-COMMERCE : E-commerce involves online transactions, so **security and legal compliance** are essential to protect users and businesses

Security Aspects

- Protection of data (customer info, payment details)

- Safe communication over the internet
- Prevention of fraud and hacking

Legal Aspects

- Rules governing online transactions
- Protection of consumer rights
- Cyber laws and regulations

THREATS IN E-COMMERCE

Common Threats

1. **Hacking** : Unauthorized access to systems
2. **Phishing** : Fake emails/websites to steal data
3. **Malware & Viruses** : Harmful software that damages systems
4. **Identity Theft** : Stealing personal information
5. **Credit Card Fraud** : Unauthorized transactions
6. **Denial of Service (DoS) Attacks** : Overloading servers to crash websites

SECURITY OF CLIENTS AND SERVICE PROVIDERS

For Clients (Customers)

- Use strong passwords
- Avoid public Wi-Fi for transactions
- Check secure websites (HTTPS)
- Enable 2-factor authentication

For Service Providers (Businesses)

- SSL encryption
- Firewalls & antivirus
- Secure servers
- Regular security audits
- Data backup systems

CYBER LAWS : Cyber laws are legal rules governing internet usage and online transactions.

Objectives

- Prevent cybercrime
- Protect data privacy
- Provide legal recognition to e-transactions
- Ensure safe digital environment

Information Technology Act, 2000

This is the primary law in India for regulating e-commerce and cyber activities.

Key Objectives

- Legal recognition of electronic records
- Legal recognition of digital signatures
- Prevention of cybercrime

RELEVANT PROVISIONS OF IT ACT 2000

Section Highlights

- **Section 4** – Legal recognition of electronic records
- **Section 5** – Legal recognition of digital signatures
- **Section 43** – Penalty for damage to computer systems
- **Section 66** – Computer-related offences (hacking)

- **Section 72** – Breach of confidentiality and privacy

OFFENCES UNDER IT ACT

Common Offences

- Hacking
- Data theft
- Identity theft
- Cyber fraud
- Publishing obscene content

SECURE ELECTRONIC RECORDS & DIGITAL SIGNATURES

Secure Electronic Records

- Protected from unauthorized access
- Ensures integrity and authenticity

Digital Signatures

- Electronic method of signing documents
- Ensures: Authentication, Integrity, Non-repudiation (cannot deny transaction)

PENALTIES

Penalties are imposed for violating cyber laws.

Examples

- Monetary fines
- Compensation for damages
- Imprisonment (for serious offences)

OBJECTIONS (LIMITATIONS / CHALLENGES)

Issues in E-Commerce Security & Law

- Lack of awareness among users
- Rapid growth of cybercrime
- Difficulty in tracking criminals
- Jurisdiction issues (cross-border transactions)
- Privacy concerns