E-Commerce: Electronic Commerce or EC is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet.

Difference 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 face to face identify, authenticate and talk to the merchant.	Neither customer nor merchant see the other.
Physical stores are not feasible to be open at all times.	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 through credit card, debit card or fund transfer.
Most goods are delivered instantly.	It takes time to transport goods.

Primary Revenue Models of E-Commerce (Cont.):

1.Advertising revenue model

a company provides a forum for advertisements and receives fees from advertisers (Yahoo)

2.Subscription revenue model

a company offers it users content or services and charges a subscription fee for access to some or all of it offerings (Consumer Reports or Wall Street Journal)

3.Transaction fee revenue model

a company receives a fee for enabling or executing a transaction (eBay or E-Trade)

4.Sales revenue model

a company derives revenue by selling goods, information, or services (Amazon or DoubleClick)

5.Affiliate revenue model

a company steers business to an affiliate and receives a referral fee or percentage of the revenue from any resulting sales (MyPoints)

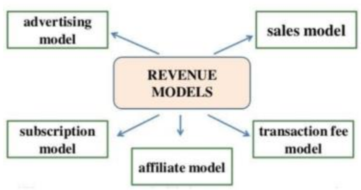


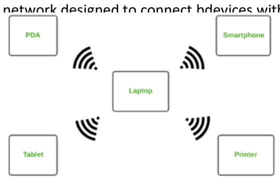
Fig.: Revenue Models of E-Commerce

TABLE 2.2 FIVE PRIMARY REVENUE MODELS

REVENUE MODEL	EXAMPLE	REVENUE SOURCE
Advertising	Yahoo.com	Fees from advertisers in exchange for advertisements
Subscription	WSJ.com, Consumerreports.org, Sportsline.com	Fees from subscribers in exchange for access to content or services
Transaction Fee	eBay.com, E-Trade.com	Fees (commissions) for enabling or executing a transaction
Sales	Amazon.com, DoubleClick.net, Salesforce.com	Sales of goods, information, or services
Affiliate	MyPoints.com	Fees for business referrals

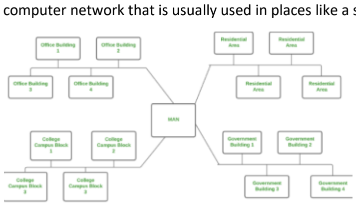
There are mainly five types of Computer Networks

1.Personal Area Network (PAN): PAN is the most basic type of computer network. It is a type of network designed to connect devices within a short range, typically around one person.



2.Local Area Network (LAN): A LAN is a computer network that connects computers through a common communication path, contained within a limited area, that is, locally.

3.Campus Area Network (CAN): CAN is bigger than a LAN but smaller than a MAN. This is a type of computer network that is usually used in places like a school or colleges.



What is Web Marketing?

Web marketing is marketing used to promote a website and hopefully get more traffic to a website. Marketing on the Web is an old game with new rules. It's a world of alliances, banner ads, e-mail marketing, and search engine techniques.

Types of Web Marketing:

*Content marketing.
*Search engine optimization (SEO)
*Display Advertising
*Pay Per Click Advertising
*Social Media Marketing
*E-Mail Marketing
*Referral Marketing
*Video Marketing

Identify the key components of e-commerce business models?

1.Value proposition
2.Revenue model
3.Market opportunity
4.Competitive environment
5.Competitive advantage
6.Market strategy
7.Organizational development
8.Management team

1.Value proposition: How a company's product or service fulfills the needs of customers. Typical e-commerce value propositions include
*Personalization/customization
*Convenience
*Price/No shipping cost
*Quick delivery
*Unparalleled Selection
*Product/service quality

2.Revenue model: How the company plans to make money from its operations.Major e-commerce revenue models include
*Advertising revenue model- Facebook
*Transaction fee revenue model- eBay, E-trade, Credit cards
*Sales revenue model – AmazonMP3, Amazon, Gap
*Affiliate revenue model – airlines/car rentals/hotels

3.Market opportunity: Refers to the company's intended market space and the overall potential financial pportunities available to the firm in that market space.
*Market space: Area of actual or potential commercial value in which company intends to operate

4.Competitive environment: The direct and indirect competitors doing business in the same market space, including how many there are and how profitable they
are.
*Number and size of active competitors.
*Each competitor's market share.
*Competitors' profitability.
*Competitors' pricing.

5.Competitive advantage: The factors that differentiate the business from its competition, enabling it to provide a superior product at a lower cost.
*Asymmetries
*First-mover
*Unfair competitive
*Leverage using vast resources to move in other markets

6.Market strategy: The plan a company develops that outlines how it will enter a market and attract customers.
*Plan to promote your products or services to attract the target audience
*potential customers

7.Organizational development: Describes how the company will organize the work that needs to be accomplished.
*The process of defining all the functions within a business and the skills necessary
*to perform each job, as well as the process of recruiting and hiring strong employees.

8.Management team: The group of individuals retained to guide the company's growth and expansion.
A strong management team:
*Make the business model work
*Give credibility to outside investors
*Has market-specific knowledge

Types of Requirement

1.Business requirements: They are high-level requirements that are taken from the business case from the projects. For example, a mobile banking service system provides banking services to Southeast Asia.The business requirement that is decided for India is account summary and fund transfer while for China account summary and bill payment is decided as a business requirement

Country	Company providing Banking Functionalities or services
India	Account Summary and Fund Transfer
China	Account Summary and Bill Payment

2.Architectural and Design requirements: These equirements are more detailed thanbusiness requirements. It etermines the overall design required to implement the business requirement. For our educational organization the architectural and design use cases would be login, course detail, etc. The requirement would be as shown below.

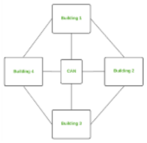
3.System and Integration requirements: At the lowest level, we have system and integration requirements. It is detailed description of each and every requirement. It can be in form of user stories which is really describing everyday business language. The requirements are in abundant details so that developers can begin coding.

4.Other Sources of Requirements

*Knowledge transfer from colleagues or employees already working on that project
*Talk about project to business analyst, product manager, project lead and developers
*Analyze previous system version that is already implemented into the system
*Analyze the older requirement document of the project

Bill Payment	Requirements
Add Billers	• Utility Provider Name • Relationship Customer Number • Auto Payments – Yes/No • Pay Entire Bill – Yes/No • Auto Payment Limit – Do not pay if Bill is over specified amount

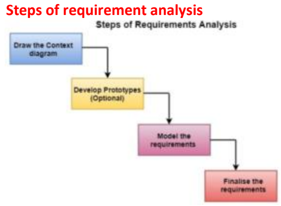
4. Metropolitan Area Network (MAN): A MAN is larger than a LAN but smaller than a WAN.



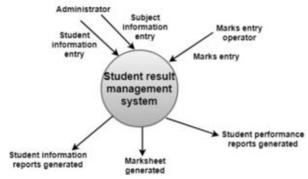
5.Wide Area Network (WAN): WAN is a type of computer network that connects computers over a large geographical distance through a shared communication path.

Advantages & Challenges of Distributed Systems
Advantages:
*Scalability *Fault tolerance *Resource sharing *High availability
Challenges:
*Complexity in management *Network latency *Security concerns *Data consistency
Advantages of E-Commerce:
1.A Larger Market 2. Customer Insights Through Tracking And Analytics 3. Fast Response To onsumer Trends And Market Demand 4. Lower Cost 5. More Opportunities To "Sell" 6. Personalized Messaging 7. Increased Sales With Instant Gratification 8. Ability to Scale Up (Or Down) Quickly And Unlimited "Shelf Space"
Disadvantages of E-Commerce:
1. Lack Of Personal Touch 2. Lack Of Tactile Experience 3. Price And Product Comparison 4. Need For Internet Access 5. Credit Card Fraud 6. IT Security Issues

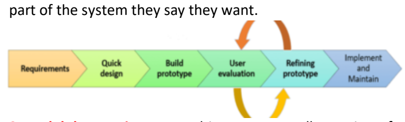
Steps of requirement analysis



1.Draw the context diagram: The context diagram is a simple model that defines the boundaries and interfaces of the proposed systems with the external world.



2.Development of a Prototype (optional): One effective way to find out what the customer wants is to construct a prototype, something that looks and preferably acts as
part of the system they say they want.



3.Model the requirements: This process usually consists of various graphical representations of the functions, data entities, external entities, and the relationships between them. The graphical view may help to find incorrect,
inconsistent, missing, and superfluous requirements. Such models include the Data Flow diagram, Entity-Relationship diagram, Data Dictionaries,State-transition diagrams, etc.
4.Finalize the requirements: After modeling the requirements, we will have a better understanding of the system behavior. The inconsistencies and ambiguities have been identified and corrected. The flow of data amongst various modules has been analyzed.