

Biyani's Think Tank

Concept based notes

E-Commerce

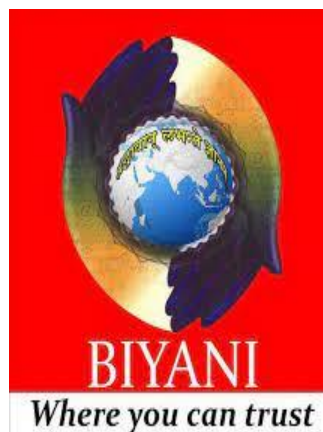
BCA Part-III

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Preface

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

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

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

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

Author

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Chapter 1

Introduction to E-Commerce

Q.1 What is E-commerce? Define Objective of E-commerce?

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

Following are some definitions of e-commerce:-

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

A commercial Stage can be decided into three main stages -

1. The advertising and searching stage
2. The ordering and payment stage
3. And the delivery stage

Objective of e-commerce- E-commerce is the environment in which information for the buying and selling of goods and services moves electronically.

There are some objectives-

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

Q2. What are the Characteristics of e-commerce?

Ans.

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

6. Customer relationship management.

Q 3. What are advantages of e- commerce?

Ans. Advantage of e - commerce:-

1. **Facilitates the globalization of business:-**e - commerce facilitates the globalization of business by providing some economical access to distant markets and by supporting new opportunities for firms to increase economies by distributing their products internationally.
2. **Provides increased purchasing opportunities for the buyer:-**As e - commerce increases sales opportunities for the seller, it also increases purchasing opportunities for buyer.
3. **Lowering staffing cost:-** As in e - commerce, the selling & purchasing process is outline, the amount of interaction with staff is minimized
4. **Market based expansion:-** An e - commerce is open to entirely new group of users, which include employees, customers, suppliers & business partners.
5. **Increased profits:-**With e - commerce, companies reach more & more customers where physical commerce cannot reach, thus increasing profits.
6. **Increased customer service & loyalty:-** e - commerce enables a company to be open for business wherever a customer needs it.
7. **Increase speed & accuracy:-** E - commerce see the speed and accuracy with which business can exchange information, which reduces cost on both sides of transactions. It is available 24 hours a day & 7 days a week.
8. **Reduction of paper storage.**
9. **Increased response times:-** In e - commerce, the interaction with the system take place in real time & therefore allows customer or bidder to respond more Quickly & thus reduces the time of discussion between then as in traditional commerce.

Q 4. What are the limitations of e-commerce?

Ans. Limitations of e – commerce:-

1. **Security:-** the security risk in e – commerce can be-
 - client / server risk
 - data transfer and transaction risk
 - virus risk
2. **High start up cost:-**

The various components of cost involved with e – commerce are:-

 - connection:- connection cost to the internet.
 - hardware / software:- this includes cost of sophisticated computer, moduier, routers, etc.
 - maintenance:- this include cost involve in training of employees and maintenance of web-pages.
3. **Legal issues:-** these issues arises when the customer data is fall in the hands of strangers.
4. **Lack of skilled personnel:-** there is difficulty in finding skilled www developers and knowledgeable professionals to manage and a maintain customer on line.
5. **Loss of contact with customers:-** Sometimes customers feels that they does not have received sufficient personal attention.
6. **Uncertainty and lack of information:-** most of the companies has never used any electronic means of communication with its customers as the internet is an unknown mode for them.
7. **Some business process may never be available to e – commerce:-**

Some items such as foods, high cost items such as jewelry may be impossible to be available on the internet.

Q 5. What is the Forces driving Ecommerce?

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

Market and Economic Pressures

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

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

2. **Global Economy:** In Present Scenario world becomes a global village and there are standard patterns in market for business, so every country must follow these norms. There is huge gap between the growth rate of developed and developing nation, so more and more developed nations are investing in every part of world. E-Commerce is the need of such a scenario.
3. **Extremely Low Labor Cost in Some Countries:** Now this the common feature of business that companies are having manufacturing units in one are of the world and the same products is marketed in other part of the world. Definitely some medium is required to maintain it and e commerce is providing such medium.
4. **Frequent Changes in Market demands:** As we discussed above that the age of technology so any change which takes place in part of the world, rapidly reflects every where so e-commerce is the tool which is necessary to sustain in present fast changing world.
5. **Increase Expectation of Consumers:** The expectation of consumers about quality and services are very high, so it works like driving force for e-commerce.
6. **Awareness Among Consumers:** Awareness Among Consumers: Now consumers are well aware. Internet, print media and electronic media keep update the consumers about new products and their rates.

Societal And Environmental Pressures

1. **Government Regulations:** Every country have its own rules and regulations but now a days almost every country have well defined cyber laws which provides a right environment for the e commerce.
2. **Reductions in Government subsidies:** Now world is very open, some countries provides lot of rebate in tax and in other forms to do

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

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

Technological Pressures

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

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

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

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

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

Ans

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

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

Ans. There are many opportunities for e-commerce as-

- 1. Financial services-**A large number of users use the internet for some form of financial guidance.
- 2. Stock trading-**Online stock trading is nowadays one of the most demanding e-commerce utilities. The ability to offer market access at a competitive price is a key advantage of online stock broking companies and this is slowly happening in India too.
- 3. Banking -** Internet banking is now growing. Many banks like ICICI and HDFC are making inroads into this area.
- 4. Legal and Professional services-** opportunities also exist for Indian companies in legal and other professional services. In terms of

opportunities for Indian legal service providers, the requirement for professional, legal and regulatory advice is expected to increase as the number of e-commerce user's increases.

5. **Tour and Travel-** The travel industry has readily adapted to e-commerce. There has been a growing emphasis on the search for alternative distribution channels within the sector, particularly with the railways and the airlines, as they seek to reduce costs. These sectors have adapted well because of their online reservation systems.
6. **Healthcare-** Healthcare represents one of the biggest expenditures of governments worldwide. The Internet has the potential to enhance communications, streamline processes and create new business opportunities, by providing high-quality administrative services and integrating information systems.

Q 8 What is Growth of E-Commerce?

Ans. According to Forrester Research, US online retail reached \$175 billion in 2007 and is projected to grow to \$335 billion by 2012. Business-to-consumer (B2C) ecommerce continues its double-digit year-over-year growth rate, in part because sales are shifting away from stores and in part because online shoppers are less sensitive to adverse economic conditions than the average US consumer.

Despite the continued growth of the channel, online retailers face several challenges to growth: Online stores are broadly perceived as a second choice for shoppers, online retail is becoming increasingly seasonal, and online shoppers rarely admit to browsing, which can drive valuable incremental dollars during their Web shopping experiences.

Q 9 What are the areas of e-commerce?

Ans The areas of e-commerce are

- 1) EDI
- 2) E-market
- 3) Internet commerce

Case Study

How Stuff Works e Commerce Site

How Stuff Works is a media and e-learning company that presents material explaining how various devices work. It originally started as a personal Web site that provided free information, grew to become very popular, received venture capital and became incorporated. The business makes money through selling advertising and product sales.

Questions you may have include:

- How did the site get popular?
- How did the business get started?
- How do they make money?

This lesson will answer those questions.

Popular site

The How Stuff Works Web site is among the top 500 sites in the United States. It became popular through appealing content, word-of-mouth advertising and good media coverage.

Started as labor of love

Marshall Brain created the How Stuff Works Web site by doing something he was interested in.

Brain has a BS degree in electrical engineering, a Masters degree in computer science. He had been president of a software development firm and had written 10 books. At the time he started this Web site, he was teaching computer science at North Carolina State University.

Since he was always fascinated in how things work and seeking to provide materials to teenagers with similar interests, he put together a Web site of articles explaining the operation of various devices in January 1998. He published an email newsletter, and by June 1998, 700 people had subscribed.

Media coverage

By the summer of 1999, the How Stuff Works site started to get some media attention. This may have been as a result of press releases, a local newspaper covering things in the area or an article on new sites

on the Internet. It is not certain how the media attention was generated for this site.

Increasing rapidly

By December 1998 the site was getting over 94,000 visitors a month. Its popularity was increasing at a great rate due to the publicity, as well as the word-of-mouth referrals. Certainly, the site was a well-done product that fulfilled the need or interest of the viewers.

Business plan

Brain and Fregenal created a business plan, describing what they hope to accomplish and their financial model, which showed how they will make and spend money. It also contained predictions of the number of visitors the site expected each month.

Their plan to gain revenue was from:

1. Ads and sponsorships
2. Sales of products, including How Stuff Works branded products

Purchases and hiring

With this money, they purchased equipment, rented space, formed a management team, hired 35 employees, launched an advertising campaign and started various projects.

They also have a Board of Directors of executives who meet monthly to discuss the progress of the company.

Because of the increased Internet traffic to the site, the company purchased their own servers and other necessary equipment to keep the site running smoothly.

Making money

How Stuff Works Inc. has a number of revenue-making ventures.

Books

They have How Stuff Works books, with two books for sale, published by Hungry Minds (publisher of the Dummies series of books).

TV and radio clips

The company is also selling one-minute video clips of Marshall Brain explaining how things work to TV stations. Marshall Brain also has

syndicated one-minute radio vignettes that they sell through Cox Radio Syndication. Both of these features also advertise the site.

Business site

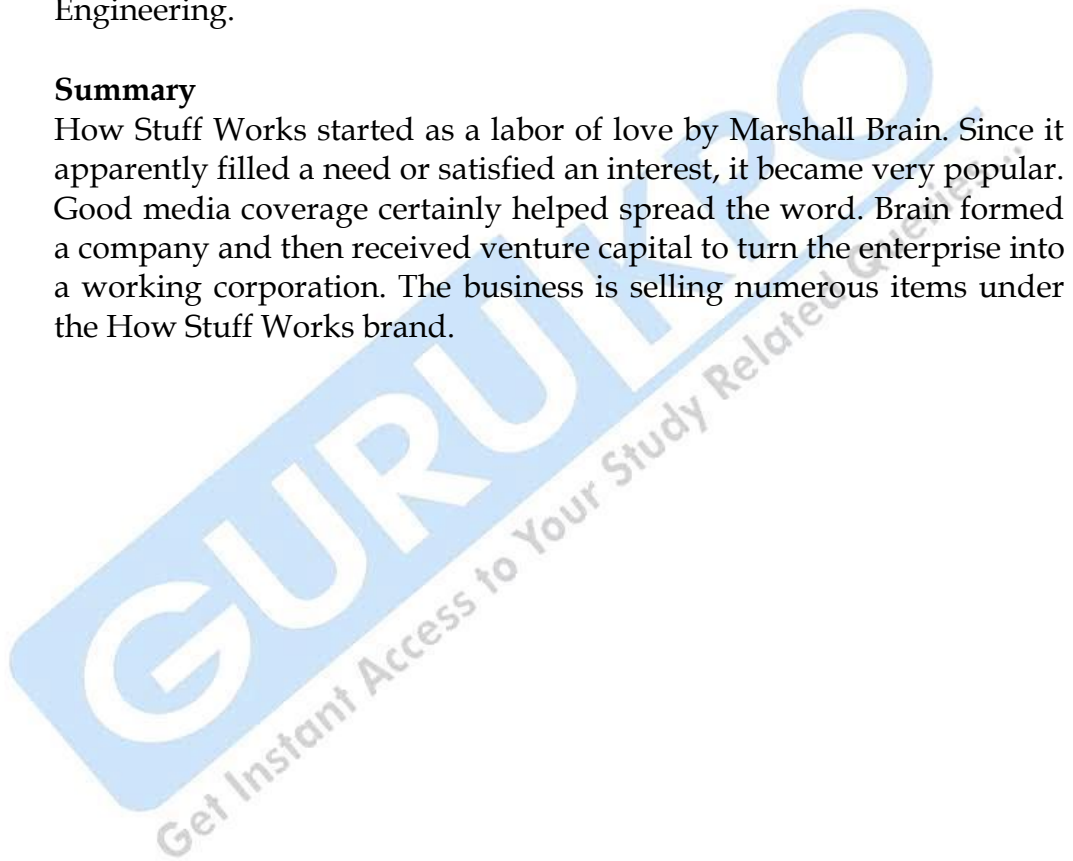
They has a business spin-off called HowBizWorks.com, as well as one aimed at fitness.

Newspaper articles

Finally, they syndicate articles to newspapers, magazines and Web sites, including The Los Angeles Times, USA Today Online, and Plant Engineering.

Summary

How Stuff Works started as a labor of love by Marshall Brain. Since it apparently filled a need or satisfied an interest, it became very popular. Good media coverage certainly helped spread the word. Brain formed a company and then received venture capital to turn the enterprise into a working corporation. The business is selling numerous items under the How Stuff Works brand.



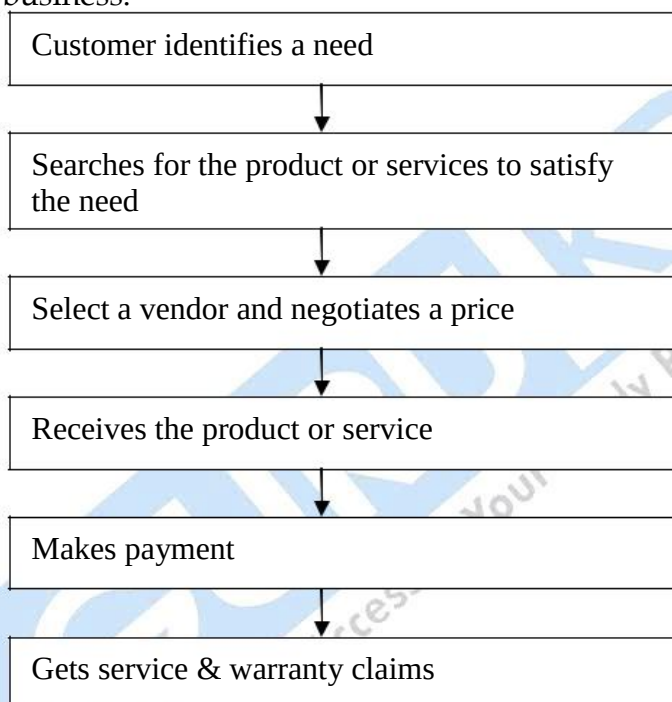
Chapter 2

E-Commerce Models

Q 1. What are the types of e - commerce?

Ans. Types of e - commerce:-

1. Business to customer (B to C):-It means the consumer is motivated by business.



B to C working

1. Visiting the virtual mall- customer visits the mall by browsing the outline catalogue.
2. Customer registers- customer has to register to become part of the site's shopper registry
3. Customer buys product.

4. Merchant processes the order- the merchant then processes the order that is received from the previous stage & fills up the necessary forms
5. Credit card is processed:- credit card of the customer is authenticated through a payment gateway or a bank.
6. Shipment & delivery:- the product is then shipped to customer.
7. Customer receives:- the product is received by customer and is verified.
8. After sales service:- after sale, the firm wants to maintain a good relationship with its customers. It is called CRM customer relationship management.

Business to business (B to B):- this is called as a business motivated by another business.

B2B is classified as:-

1. Market place:- a digital electronic market place where suppliers and commercial purchasers can conduct transactions.
2. E - distributors:- a company that supplies products and services directly to individual business.
3. B2B service provider:- it is a company that access to internet based software application to another companies.
4. Infomediary: - a company whose business model is premised upon gathering information about customers & selling it to other businesses.

Consumer to business (C to B):- a business motivated by a customer.

The various C2B classified into:-

1. Idea collectors:- consumers generally have a great idea about how to improve the existing products and what new features can be added to new products. E.g. ideas.com
2. Reverse auctions:- it allow prospective airline travelers to visit the website and name their price for travel between only pair of city. If

an airline is willing to issue a ticket at their price, the passenger is obligated to buy.

3. Consumer to consumer (C to C):-

In this type, a consumer is motivated by another consumer. Consumers sell directly to other consumers via online classified ads and auctions, or by selling personal services or expertise online. E.g. ebay.com

Q 2 Explain Brokerage Model of e-commerce ?

Ans. Brokerage Model:- Brokers are market-makers: they bring buyers and sellers together and facilitate transactions. Brokers play a frequent role in business-to-business (B2B), business-to-consumer (B2C), or consumer-to-consumer (C2C) markets. Usually a broker charges a fee or commission for each transaction it enables. The formula for fees can vary. Brokerage models include:

Marketplace Exchange -- offers a full range of services covering the transaction process, from market assessment to negotiation and fulfillment. Exchanges operate independently or are backed by an industry consortium.

Buy/Sell Fulfillment -- takes customer orders to buy or sell a product or service, including terms like price and delivery.

Demand Collection System -- the patented "name-your-price" model pioneered by Priceline.com. Prospective buyer makes a final (binding) bid for a specified good or service, and the broker arranges fulfillment.

Auction Broker -- conducts auctions for sellers (individuals or merchants). Broker charges the seller a listing fee and commission scaled with the value of the transaction. Auctions vary widely in terms of the offering and bidding rules.

Transaction Broker -- provides a third-party payment mechanism for buyers and sellers to settle a transaction.

Distributor -- is a catalog operation that connects a large number of product manufacturers with volume and retail buyers. Broker

facilitates business transactions between franchised distributors and their trading partners.

Search Agent -- a software agent or "robot" used to search-out the price and availability for a good or service specified by the buyer, or to locate hard to find information.

Virtual Marketplace -- or virtual mall, a hosting service for online merchants that charges setup, monthly listing, and/or transaction fees. May also provide automated transaction and relationship marketing services.

Q 3 Explain InfoMediary Model of e-commerce ?

Ans. InfoMediary Model:- Data about consumers and their consumption habits are valuable, especially when that information is carefully analyzed and used to target marketing campaigns. Independently collected data about producers and their products are useful to consumers when considering a purchase. Some firms function as infomediaries (information intermediaries) assisting buyers and/or sellers understand a given market.

Advertising Networks -- feed banner ads to a network of member sites, thereby enabling advertisers to deploy large marketing campaigns. Ad networks collect data about web users that can be used to analyze marketing effectiveness.

Audience Measurement Services -- online audience market research agencies.

Incentive Marketing -- customer loyalty program that provides incentives to customers such as redeemable points or coupons for making purchases from associated retailers. Data collected about users is sold for targeted advertising.

Q 4 Explain Community Model of e-commerce?

Ans. Community Model:- The viability of the community model is based on user loyalty. Users have a high investment in both time and emotion. Revenue can be based on the sale of ancillary products and services or voluntary contributions; or revenue may be tied to contextual advertising and subscriptions for premium services. The Internet is

inherently suited to community business models and today this is one of the more fertile areas of development, as seen in rise of social networking.

Open Source -- software developed collaboratively by a global community of programmers who share code openly. Instead of licensing code for a fee, open source relies on revenue generated from related services like systems integration, product support, tutorials and user documentation

Open Content -- openly accessible content developed collaboratively by a global community of contributors who work voluntarily.

Public Broadcasting -- user-supported model used by not-for-profit radio and television broadcasting extended to the web. A community of users supports the site through voluntary donations.

Social Networking Services -- sites that provide individuals with the ability to connect to other individuals along a defined common interest (professional, hobby, romance). Social networking services can provide opportunities for contextual advertising and subscriptions for premium services.

Q 5 Explain Aggregator Model of e-commerce?

Ans. Aggregator Model-Classic wholesalers and retailers of goods and services are increasingly referred to as —e-tailers|| .Sales can be made based on list prices or through auctions.

Following are some of the aggregator models:

1. **Virtual merchant** - This is a business that operates that only from the web and offers either traditional or web-specific goods or services. The method of selling may be by list price or auction.
2. **Catalogue merchant**-Catalogue merchant is the migration of mail order to a web-based order business.
3. **Surf and turf**- This is a merchant that deals strictly in digital products and services and, in its purest form, conducts both sales and distribution over the Web.

4. **Bit vendor** – This is a merchant that deals strictly in digital Products and services and, in its purest form, conducts both sales and distribution over the web.
5. **Subscriptions model**-in this, the users pay for access to the site. High value-added content is essential. Generic news content, viable on the news-stand, has proven less successful as a subscription model on the web.

Q 6 Explain value chain Model of e-commerce?

Ans. Value chain Model- value chain moves business away discrete streams of data about the product being made to one unified pool of information-one that even extends outside the company to suppliers and customers. The goal is to develop full and seamless interaction among all members of the chain, resulting in lower inventories, higher customer satisfaction, and shorter time to the market.

Generalized Portal : AltaVista as a Value Chain Model

AltaVista Company is the premier knowledge resource on the Internet. It strong engine tool and patented technology.

By capitalizing on the unique Web-wide features and services, the AltaVista network provides a distinct Internet experience through multiple integrated platforms, as in the following:

1. AltaVista search
2. AltaVista shopping.com
3. AltaVista live!
4. AltaVista raging bull
5. AltaVista free access
6. AltaVista international

Personalized Portal: My Yahoo! As a Value Chain Model

Some of the topics that Yahoo offers are:

1. Pick your weather cities
2. Track your stock quotes
3. Read your choice of news
4. Find local movie Showtime
5. Follow your favorite sports teams

Case Study

Brand Parle-G Case Study

Status: Has a market share of 60% in the glucose biscuits category, worth about Rs2,000 crore

Brand story: In the hit Bollywood movie Welcome, actor Nana Patekar, in a passing reference to Parle-G, notes that even biscuits command respect and have to be addressed with a ji (a term of respect in Hindi). His remark, while made in jest, is not far off the mark.

It is a heritage brand. We sell over 25 crore packets every month. That should reflect the stature of the brand,|| says Praveen Kulkarni, marketing head at Parle Products Pvt. Ltd.

Parle's mantra has always been about repositioning the brand without tweaking the look and feel of the product. —The brand is clearly an Indian brand and it straddles all economic strata. The fact that it is a staple for everyone in the house keeps it going,|| says Nirvik Singh, chairman and president, Grey Global Group, South and South-East Asia, the agency that handles the Parle-G account.

There was a time when Parle-G's dominance was threatened by rival brands, especially the Tiger brand from Britannia. —We found out that Tiger was getting stronger in the kids segment, and we decided to change our positioning,|| says Kulkarni. Later, when the company sponsored the television show Shaktimaan on Doordarshan, it literally rescued Parle-G.

The brand also had some innovative commercials involving young children with a new punchline, G means Genius, which was an instant hit. While rivals have signed on celebrities, Parle-G has managed to retain its leadership position with just a simple white-and-yellow

striped wrapper with a picture of a baby on it. —We don't need celebrities as the brand equity is so strong,|| says Kulkarni.

The biggest concern is that the brand shouldn't become outdated as it is a historic brand. The brand has managed to retain its leadership position because it has evolved its campaign with every consumption trend,|| says Singh.

The last campaign, Hindustan ki Takat, (the strength of India) is a huge position which no other brand can take so effortlessly.||



Chapter 3

Electronic Payment Systems

Q 1 What is Electronic Payment System.

Ans Electronic Payment is a financial exchange that takes place online between buyers and sellers. The content of this exchange is usually some form of digital financial instrument (such as encrypted credit card numbers, electronic cheques or digital cash) that is backed by a bank or an intermediary, or by a legal tender.

Q 2 What is the Special features required in payment systems ?

Ans. There are different types of features in payment system-

1. **National system of exchange-**over the past 40 years, growth in international trade, which has exceeded the expansion of GDP at monetary policies which are pursued purely at the national level, has resulted in a global economy which increasingly has no place for economic and monetary policies which are pursued purely at the national level. Similarly, while the Bretton Woods monetary system established after 1945-reversed special status for the US Dollar, the number of currencies having 'global' status has expanded in number, thereby removing the linkage to their respective political masters.
2. **International systems of exchange-** Every transaction whether trade- or non-trade-related gives rise to obligations that needs to be settled through a transfer of money between the parties involved. Settlement of non-trade-related and large value transactions is increasingly based on the electronic large value payment systems, which have been developed earlier.

3. **Banking and Securities markets-** Attempts to establish universal international payment systems that can be used cost-effectively for the full range of transactions have to date been unsuccessful. A failure to agree on common standards has meant that a major proportion of the instructions, which are sent by banks follow a free messaging, format. When messages are on free format recipients have to interpret and to rekey them, involving higher levels of cost, more time and making the systems much more prone to the introduction of errors. At the same time there is a countervailing pressure to settle transactions, particularly those relating those to securities, more quickly.

Q 3 Explain The types of E-Payment Systems ?

Ans The Types of E-Payment systems are:

1. **Credit card payment** is the most common type of payment method, which account for 80 percent of online payments in the US and 50 percent of online purchases outside the US. To use the digital credit card payment systems on web, it has been extended the functionality and security to validate authentic owner of the card. Verified by visa is introduced by Visa.
2. **Digital wallets** are quicker, efficient and easy way to pay online. Unlike credit card, payers need not to enter credit card information every time of purchase, instead payers can pay by one or two mouse click. Amazon's 1-Click Shopping is one of the best-fitted examples.
3. **Micropayment** is designed to purchase less than US\$ 10. **Accumulated balance digital payment systems** are used to make micropayment and purchases on the web. The shoppers receive invoice through their convenient utility bills such as telephone bill, electricity bill, internet bill etc. For example, Payment One charges its customers to their monthly telephone bill.
4. **Stored value payment system** is instant online payment and the maximum amount of purchase depends on the value stored in a

digital account. The digital account relies on the amount stored in customers bank, checking, credit card account etc. It's kind of online debit account; E-Account offers a prepaid debit account for online purchases.

5. **Smart card** is another type of stored value system used for micropayment. It's kind of —electronic purse|| stored digital money with necessary information. To pay online by smart card, a digital card reader (a device that read the information in smart card) is necessary to attach with shoppers computer. American Express's Blue smart card is one of the good examples.
6. **Digital cash** or electronic cash or **e-cash** is used for micropayment or larger purchases. Digital cash represents the electronic form of currency which is not same as conventional currency in the market. Users use specific software for trading and transacting this electronic currency with other e-cash user or retailer through Internet. ECoin.net is an example of a digital cash service.
Web-based **peer-to-peer payment** systems is becoming very popular and its growing. The vendors or individual who does not have any facility to accept payment through credit card payment or any other convenient method, they can use this peer-to-peer to accept payment. For example, millions of eBay buyers and sellers are using PayPal to pay and receive payment.
6. **Digital checking payment systems** extend traditional checking system so they can be used for online payment. It is less expensive than credit card and much faster than traditional paper based checking. Example, Western Union Money Zap and eCheck.
8. **Electronic billing presentment and payment systems** are used to pay routine monthly bills through electronic fund transfer from bank account and credit card account. Transaction occurs online. The most common type of e-payment system is through credit card payment.
9. **Electronic Cheques** are modeled on paper checks, except that they are initiated electronically. They use digital signatures for signing and endorsing and require the use of digital certificates to authenticate the payer, the payer's bank and bank account. They are

delivered either by direct transmission using telephone lines or by public networks such as the Internet.

Benefits of electronic Cheques:

- Well suited for clearing micro payments. Conventional cryptography of e-cheques makes them easier to process than systems based on public key cryptography (like digital cash).
- They can serve corporate markets. Firms can use them in more cost-effective manner.
- They create float and the availability of float is an important requirement of Commerce.

10. Electronic Purses The Smart Card system application software enables simple

Administration of the smart card's electronic purse. The member Details are easily maintained on the system with the ability to add a Member onto the system, edit an existing member's information and Delete a member from the system. Members are maintained in Categories where, among other things, the category determines the Credit limit and access privileges for the member. Clicking one Button will initialize a Smart card for a member.

If lost, a Smart card can be hot listed. A new card can be issued by clicking a button and the member's current balance will be Automatically transferred. Funds can be added or removed from the card by simply showing.

The card to the reader clicking on a transaction type (Credit, Debit) Entering an amount Clicking "Write to Card". A statement can be Printed detailing the member's purchase history. Transactions can Be listed in detail or summary format by date and location. This Software can be in integrated with the existing system.

Chapter 4

E-Marketing

Q 1 What is e-marketing? define advantages of e-marketing?

Ans. E-Marketing is a subset of e-Business that utilities electronic medium to perform marketing activities and achieve desired marketing objectives for an organization. Internet Marketing, Interactive Marketing and Mobile Marketing for example, are all a form of e-Marketing.

E-Marketing is also a part of e-Business that involves electronic medium to achieve marketing objectives. E-Marketing is set on a strategic level in addition to traditional marketing and business strategy.

Advantages of e-Marketing

Following are some of the advantages of e-Marketing:

- Reduction in costs through automation and use of electronic media
- Faster response to both marketers and the end user
- Increased ability to measure and collect data
- Opens the possibility to a market of one through personalization
- Increased interactivity

Q 2. What is E-Customer Relationship Management?

Ans. E-customer relationship management applications to meet the critical requirements of businesses that need to accommodate rapid growth, shifting market demands, and rising customer expectations. Our applications conform to the client's unique requirements and helps strengthen customer relationships by automating important sales, marketing, customer support, engineering, and quality assurance processes across the organization. The customer self-service applications that we develop allow customers online access to in-depth information on the company's products and services, order history, product updates, and service request fulfillment.

There are some benefits of e-customer relationship management-

1. E-customer relationship management services that engage customers, suppliers, employees and partners in a broader

communications web, allowing them to collaborate, exchange data and conduct business online in a safe and efficient manner.

2. Development methodology allows us to spread development services across time zones, which allows customers to benefit from a 24-hour development cycle.
3. E-commerce providing clients with state-of-the-art e-customer relationship management services by integrating technology, innovation and strategy with their business processes.

Role of the Internet on CRM

1. Use the web as another channel for interacting with customers
2. Brick and mortar companies can create more customer touch points
3. Share relevant information with customer through electronic channels
 - 1) Web
 - 2) Email
 - 3) FTP

Q 3. What is E-Supply Chain Management?

Ans. Supply Chain Management is the business function that coordinates the movement of materials and information through the supply chain. Your suppliers should help your firm achieve its competitive objectives

The Supply Chain Management is effective information and material flow throughout a network of customers and suppliers. The potential for improved productivity, cost reduction and customer service are enormous. Of course, the benefits are based on effectively employing the right processes and supporting information technology. This is a higher priority than ever before. Providing the right amount of relevant information to those who need to know it, when they need to know it is, in fact, effective Supply Chain Management from an information point of view.

Good supply chain practitioners know that information should be passed on only to those who

Need to know it, in the form they need to have it. Demand information, inventory positions,

Order-fulfillment, supply management and a whole host of other information exchange activities will change how we sell products, supply products and make and receive payments for goods and services. The e-Supply Chain will have customers and suppliers seamlessly linked together, throughout the world, exchanging

information almost instantly. The velocity of relevant information flow will be so fast that, as a result, responding to the inevitable changes in expected vs. actual customer demand will mandate demand-driven manufacturing and supporting processes that provide for faster changes in the actual material flow to match demand.

The E-Supply Chain is the mixes or integration of e-Procurement System, e-Billing System and other e-Business tools. It enhances you, your suppliers and your distributors to automatically manage the specifications, quantity, costs and delivery time of materials and products with higher productivity.

e - Supply Chain & Structure



Objectives of Supply Chain Management

1. Minimize the cost of materials and material movement
3. Minimize inventory investment
4. Ensure timely delivery of materials at every level of the supply chain and to customers (product availability)
5. Ensure quality of materials used in manufacturing or services
6. If needed, get product design help or other services from suppliers.

E-Business Benefits

- Reduce your costs of logistics, production, procurement and distribution, while having better control of processes and management. Enable you to find suppliers who give you the lowest prices or high cost-effective products/materials.

- With the information see-through effect, it allows every party involved to make their preparation in advance and instant responses upon the acquiring time.
- Enable you control your inventory at its lowest level (or even at zero level) because your suppliers and distributors can see through it and always know when they should prepare their production or respond to you at Just-In-Time (JIT).
- Allow your suppliers to help you control your inventory by taking responsibility to replenish it at the most appropriate level. Help you
- easily handle your back-office management.



Chapter 5

Security Issues in E-Commerce

Q1 What are Security risk of E-Commerce?

Ans. Security risk associated with a network and a website can be in some ways as follows:

Network and website Security Risks

As part of planning a startup e-business' security, management should become familiar with network and web server security risk terminology.

Malicious hackers, also called crackers, gain access to steal valuable information such as credit card numbers, attempt to disrupt service, or cause any other damage.

1. **Denial of service Attacks-** A Denial-of-service or DoS attack is an attack on a network that is designed to disable the network by flooding it with useless traffic or activity. While a DoS attack does not do any technical damage, it can do substantial financial damage to an e-business, because every second an e-business's network or a website is down, it may result in lost revenues.

The attacker first breaks into hundreds or thousands of random, insecure computers on the internet and installs an attack program. Then he coordinates them all to attack the target simultaneously. Thereafter, the target is attacked from many places at once: the traditional defenses just do not work, and the system crashes.

So far, these attacks are strictly denial-of =-services. They don't affect the data on the websites. These attacks cannot steal credit card numbers or proprietary information. They cannot transfer money out of your bank account to trade stocks in your name. Attackers cannot gain financially from these attacks.

2. **Viruses-** Viruses are the most common security risk faced by e-businesses today. A virus is a small program that inserts itself into other program files that then become —infected|| , just as a virus in nature embeds itself in normal human cells. The virus is spread when an infected program is executed, and this further infects other programs. Examples of virus effects include inability to boot, deletion of files or entire hard drives, inability to create or files, and

thousands of other possibilities. Viruses are generally introduced into a computer system via e-mail or by unauthorized network access.

3. **Trojan horse-** It is a special type of virus that emulates a benign application. It appears to do something useful or entertaining but actually does something else as well, such as destroying files or creating a —back door|| entry point to give an intruder access to the system.
4. **Worm-** This is a special type of virus that does not directly alter program files.
Instead, a worm replaces a document or an application with its own code and then uses that code to position itself.
A macro is a short program written in an application such as Microsoft word or Excel to accomplish a series of keystrokes.
Worms mainly spread by exploiting vulnerabilities in operating systems, or by tricking users to assist them.
5. **Spyware-** Spyware is software that gathers user information from the machine on which it is installed, often transmitting it to an outside user or company. It is usually downloaded and installed along with other applications or media players, often without the user's approval or knowledge.
Some spyware tracks websites visited for advertisers or collects personal information from web forms. Others seek out email address for spam lists or credit card numbers, passwords, and other potentially harmful information.
6. **Adware-** Adware is any software application in which advertising banners are displayed while the program is running. The authors of these applications include additional code that delivers the ads, which can be viewed through pop-up windows or through a bar that appears on a computer screen. The justification for adware is that it helps recover programming development cost and helps to hold down the cost for the user.

Q 2 What are the types of threats in E-commerce?

Ans There are four types of threats-

1. **Interception**-An **interception** means that some unauthorized party has gained access to an asset. The outside party can be a person, a program, or a computing system. Examples of this type of failure are illicit copying of program or data files, or wiretapping to obtain data in a network. Although a loss may be discovered fairly quickly, a silent interceptor may leave no traces by which the interception can be readily detected.
2. **Interruption**-In an **interruption**, an asset of the system becomes lost, unavailable, or unusable. An example is malicious destruction of a hardware device, erasure of a program or data file, or malfunction of an operating system file manager so that it cannot find a particular disk file.
3. **Modification**-If an unauthorized party not only accesses but tampers with an asset, the threat is a **modification**. For example, someone might change the values in a database, alter a program so that it performs an additional computation, or modify data being transmitted electronically. It is even possible to modify hardware. Some cases of modification can be detected with simple measures, but other, more subtle, changes may be almost impossible to detect.
4. **Fabrication**-Finally, an unauthorized party might create a **fabrication** of counterfeit objects on a computing system. The intruder may insert spurious transactions to a network communication system or add records to an existing database. Sometimes these additions can be detected as forgeries, but if skillfully done, they are virtually indistinguishable from the real thing.

Q 3 What are security risk management approach in E-commerce?

Ans- Steps for risk management

1. Know the risks and train the troops

Your exposure to e-commerce risk depends on your business policies, operational practices, fraud prevention and detection tools, security controls, and the type of goods or services you provide. Your entire organization should have a thorough understanding of the risks associated with any Internet transaction and should be well-versed in your unique risk management approach.

2. Select the right acquirer and service provider

If you have not launched an electronic storefront, you need to partner with a Visa acquirer that can provide effective risk management support and demonstrate a thorough understanding of Internet fraud risk and liability. You also want to take a good, hard look at any service provider before you sign a contract. Bottom line? Does the service provider have what it takes to keep your cardholder data safe and minimize fraud losses?

3. Develop essential website content

When designing your website, keep operational needs and risk factors foremost in your mind. Key areas to consider are privacy, reliability, refund policies, and customer service access.

4. Focus on risk reduction

Your sales order function can help you efficiently and securely address a number of risk concerns. You can capture essential Visa card and cardholder details by highlighting required transaction data fields and verifying the Visa card and customer data that you receive through the internet.

5. Build internal fraud prevention

By understanding the purchasing habits of your website visitors, you can protect your business from high-risk transactions. The profitability of your virtual storefront depends on the internal strategies and controls you use to minimize fraud. To avoid losses, you need to build a risk management infrastructure, robust internal fraud avoidance files, and intelligent transaction controls.

6. Use Visa tools

To reduce your exposure to e-commerce risk, you need to select the use the right combination of fraud prevention tools. Today, there are a number of options available to help you differentiate between a good customer and an online thief. Key Visa tools include Address Verification Service (AVS), Card Verification Value 2 (CVV2), and Verified by Visa.

7. Apply fraud screening

Fraud-screening methods can help you minimize fraud for large-purchase amounts and for high-risk transactions. By screening online Visa card transactions carefully, you can avoid fraud activity before it results in a loss for your business.

8. Implement Verified by Visa

The tool Verified by Visa can create the most significant reduction in merchant risk exposure by increasing transaction security through cardholder authentication and by providing chargeback protection against fraud. E-commerce merchants who work with their acquirers to implement Verified by Visa are protected from certain fraud-related chargebacks on all personal Visa cards with limited exceptions. If applicable, E-commerce merchants may receive a reduced interchange rate.

Q4 What are cyber laws in e-commerce?

Ans. Cyber laws are meant to set the definite pattern, some rules and guidelines that defined certain business activities going on through internet legal and certain illegal and hence punishable. The IT Act 2000, the cyber law of India, gives the legal framework so that information is not denied legal effect, validity or enforceability, solely on the ground that it is in the form of electronic records.

The IT Act 2000 attempts to change outdated laws and provides ways to deal with cyber crimes. Let's have an overview of the law where it takes a firm stand and has got successful in the reason for which it was framed.

1. The E-commerce industry carries out its business via transactions and communications done through electronic records. It thus becomes essential that such transactions be made legal. Keeping this point in the consideration, the IT Act 2000 empowers the government departments to accept filing, creating and retention of official documents in the digital format. The Act also puts forward the proposal for setting up the legal framework essential for the authentication and origin of electronic records / communications through digital signature.
2. The Act legalizes the e-mail and gives it the status of being valid form of carrying out communication in India. This implies that e-mails can be duly produced and approved in a court of law, thus can be regarded as substantial document to carry out legal proceedings.

3. The act also talks about digital signatures and digital records . These have been also awarded the status of being legal and valid means that can form strong basis for launching litigation in a court of law. It invites the corporate companies in the business of being Certifying Authorities for issuing secure Digital Signatures Certificates.
4. The Act now allows Government to issue notification on the web thus heralding e-governance.
5. It eases the task of companies of the filing any form, application or document by laying down the guidelines to be submitted at any appropriate office, authority, body or agency owned or controlled by the government. This will help in saving costs, time and manpower for the corporate.
6. The act also provides statutory remedy to the coporates in case the crime against the accused for breaking into their computer systems or network and damaging and copying the data is proven. The remedy provided by the Act is in the form of monetary damages, not exceeding Rs. 1 crore(\$200,000).
7. Also the law sets up the Territorial Jurisdiction of the Adjudicating Officers for cyber crimes and the Cyber Regulations Appellate Tribunal.
8. The law has also laid guidelines for providing Internet Services on a license on a non-exclusive basis.

Cyber Crimes

"Computer or Cyber crimes are considered as illegal, unethical or unauthorized behavior of people relating to the automatic processing and transmission of data, use of Computer Systems and Networks".

Common types of Cyber Crimes may be broadly classified in the following groups:-

1. Against Individuals: - a.

Against Person: -

- i. Harassment through e-mails.
- ii. Cyber-stalking.

- iii. Dissemination of obscene material on the Internet.
- iv. Defamation.
- v. Hacking/cracking.
- vi. Indecent exposure.

b. Against property of an individual: -

- i. Computer vandalism.
- ii. Transmitting virus.
- iii. Internet intrusion.
- iv. Unauthorized control over computer system.
- v. Hacking /cracking.

2. Against Organizations: -

a. Against Government, Private Firm, Company, Group of Individuals: -

- i. Hacking & Cracking.
- ii. Possession of unauthorized information.
- iii. Cyber terrorism against the government organization.
- iv. Distribution of pirated software etc.

3. Against Society at large: -

- i. Pornography (specially child pornography).
- ii. Polluting the youth through indecent exposure.
- iii. Trafficking.

Q 5. What is Business Ethics in e-commerce?

Ans. An RBE (Responsible Business Conduct) is characterized by responsible business conduct at all four levels of its identity 4 as an enterprise:

1. Compliance with the law
2. Risk management
3. Reputation enhancement
4. Value added to the community

Responsible business conduct includes the choices and actions of owners, managers, employees, and agents that are

- (a) within their authority,
- (b) well informed,
- (c) intended to pursue the enterprise purpose and meet reasonable stakeholder expectations, and

- (d) sustainable over time. Responsible business conduct allows an enterprise to improve its business performance, make profits, and contribute to the economic progress of its community.

Among the lessons learned by both business and government is that responsible business conduct can be encouraged by the structures and systems, procedures, and practices of responsible business conduct, often called *corporate governance* or *best practices*. Moreover, many businesses now account for the impact they have on all their stakeholders, including their social impact—how they deal with employees, suppliers, and the community—and their environmental impact—how they treat the environment.⁵ A management tool owners and managers use to encourage responsible business conduct is commonly called a *business ethics program*. A business ethics program also helps owners and managers address the *triple bottom line*: the financial, social, and environmental results or impacts of the business's operations. Business owners and managers have learned that a business ethics program helps owners and managers improve their business performance, make profits, and contribute to economic progress by better

- Recognizing political, economic, social, and technological pressures
- Understanding organizational culture: core beliefs, participation, responsibility, knowledge sharing, and methods of dealing with conflict
- Fostering reasonable stakeholder expectations
- Developing responsible management practices to meet stakeholder expectations
- Learning from enterprise decisions and activities

A business ethics program provides a toolkit of leadership and management practices to aid any enterprise—large or small—in the responsible pursuit of its envisioned future. It helps owners and managers ensure that their employees and agents comply with applicable laws and regulations. It also helps them minimize risk to the enterprise, enhance the enterprise's reputation, and bring value to stakeholders by adapting emerging global standards of responsible business conduct and best practices.

Q 6 What is EDI applications in e-commerce?

Ans. EDI is the electronic transfer of structured business documents in an organization internally among groups of departments or externally

with its suppliers, customers. The documents are used in EDI are invoices, purchases orders, acknowledgements and payments. EDI(Electronic Data Interchange) is the direct communication of trading messages between computer systems, using national and international telecommunication networks.

EDI definition

EDI is defined by International Data Exchange Association (IDEA) as:-This definition has four elements-

1. **Structured data-** EDI transactions are composed of codes, values and short pieces of text if necessary; each element with a strictly defined purpose. For example, an order has codes for the customer and product and values such as quantity ordered.
2. **Agreed message standards-** The EDI transaction has to have a standard format. The standard is not just agreed between the trading partners but is a general standard agreed at national or international level. A purchase order will be one of a number of agreed message standards.
3. **From one computer system to another-** The EDI message sent is between two computer applications. There is no requirement for people to read the message or relay it in the a computer system.
4. **By Electronic Means-** Usually this is by data communications but the Physical transfer of magnetic tape or floppy disc would be within the definition of EDI. Often networks specifically designed for EDI will be used.

Glossary

A

Acquirer Financial institution that maintains the merchant card processing services and receives transactions to be distributed to the card issuers for a merchant.

Address Verification System (AVS) Process used by a credit card processor or other party to verify that a customer's billing address matches that of their credit card statement.

Affiliate A person, organization, or establishment that drives traffic to a merchant's web site for a percentage of successful sales transactions.

Affiliate Program A popular website promotion tool where a website contracts with other websites for driving visitor to its site. The revenue is calculated according to the traffic brought by a particular website.

Apache An open source web server that runs on most commonly used platforms.

Application Service Provider (ASP) A business that provides remote access to a software application over the internet.

Asymmetric (or "Public Key") Cryptography A cryptography technique whereby each user has both a public key and a private key. Asymmetric systems have two primary uses, encryption and digital signatures.

Authorization The process of verifying that a credit card has sufficient funds available to cover the amount of transaction. The amount authorized is reserved against the available balance of a customer's credit card.

B

Bandwidth Bandwidth refers to how fast data flows through the path that it travels to your computer; it's usually measured in kilobits, megabits or gigabits per second.

Batch Processing To process a grouping of orders all at once. Such processing might include capturing funds and creating shipping labels.

Business to Business E-Commerce (B2B) The buying and selling of goods and services over the Internet between two businesses. A b2b system is password protected to ensure sensitive price information is not made available to the public. A distributor might use a B2B e-commerce system to purchase goods from a manufacturer.

Business to Consumer E-Commerce (B2C) The buying and selling of goods and services over the Internet between a merchant and a consumer.

C

Card Verification Value (CVV) A three-digit number printed in the signature space on the back of most credit cards, such as Visa, MasterCard, and Discover cards. On American Express Cards it is a four digit code. The CVV is designed to reduce credit card fraud by ensuring that the customer has the credit card in their possession.

Compilation The process of creating an executable program from source code.

Control Panel A graphical user interface that is provided by a web hosting company to allow a user to perform functions such as FTP, email administration, password changing and database administration.

Cookies Information that a website puts on your hard disk storing information about you. Typically, cookies record your preferences when using a particular site. This allows the website to be tailored to your specific requirements, and may also allow the site operators to target you with direct marketing according to your interests.

D

Digital Certificate An electronic document verifying the ownership of a public key. This is designed to help prevent people impersonating others.

Digital Signature A verification process that relies on cryptography. It allows the recipient to know the sender's identity and that there have been no alterations to the message during transit.

Directory Topical lists of Internet resources, arranged hierarchically. Directories are meant to be browsed, but they can also be searched.

Directories differ from search engines in one major way - the human element involved in collecting and updating the information. Examples of directories are Yahoo! & Open Directory.

Domain Name The unique name given to every website. It is used to physically locate a website over the Internet. A domain name consists of three different parts with each separated by a dot. These are host server name, the unique name of the website and the third defining the purpose/type of the website.

Domain Name Registrar A company authorized to receive domain name registration requests, approve registrations and initiate propagation of registration information throughout the Internet.

Domain Name System (DNS) An Internet service that translates domain names in IP addresses. Used to resolve domain names to specific host computers.

Download To transfer files from a server or host computer to one's own computer.

Drop-ship A scenario by which a customer places an order with via a retailer only to have the purchased goods sent directly from another location.

E

E-Commerce The buying and selling of goods and services over the Internet.

Encryption The manipulation of data to prevent accurate interpretation by all but those for whom the data is intended.

F

File Transfer Protocol (FTP) A globally accepted set of rules used while transferring files from one computer to another computer of a network or Internet.

Firewall A system configured to control access to or from a network. Firewalls can be implemented in both hardware and software or a combination of both. A firewall examines each network packet to determine whether to forward it toward its destination.

Fulfillment To carry out the processing of an order including picking, packing, and shipping of product.

G

Gateway or Payment Gateway A business or software that enables e-commerce systems to communicate with a merchant's Merchant Account Provider to enable online credit card processing.

GNU GNU stands for "GNU's not Unix," and refers generally to software distributed under the GNU Public License (GPL).

GPL GNU Public License - A license applied to a program to specify it can be distributed and modified to/by anyone, but if a modified version is distributed, the source must be distributed too.

H

Hyperlink A word or image on one website that leads to another website when —clicked|| .

HTML (Hypertext Markup Language) A set of markup symbols or codes inserted in a file intended for display on a World Wide Web browser page.

HTTP (Hypertext Transfer Protocol) The protocol that is used to transfer and display hypertext documents.

I

ICANN Formed in October 1998, the Internet Corporation for Assigned Names and Numbers is a non-profit corporation with responsibility for management of the Internet domain name system. ICANN is comprised of a broad coalition of the Internet's business, technical, and academic communities both in the US and worldwide.

Inventory The quantity of goods and materials on hand waiting to be sold.

Invoice A detailed list of goods shipped with a detailed account of all costs including product prices, shipping cost, and sales tax.

IP Address An identifier for a computer on the Internet. The format of an IP address is a 32-bit numeric address written as four numbers separated by periods. Each number can be zero to 255. For example, 100.160.102.5 could be an IP address. A web hosting server may have one or many IP addresses.

K

Key A mathematical value that determines the outcome of the encryption and decryption functions.

Keyword Tag An HTML Meta tag used to help define the important keywords of a page.

L

Linux An open-source operating system derived from the Unix operating system. It is used most commonly to run servers.

M

Merchant Account An online bank account required by a store to receive payments through electronic mediums like credit cards. It can be considered as a virtual bank account that receives electronic money.

Merchant Account Provider A bank or other institution that provides accounts to merchants wishing to process online credit card transactions.

Meta tag A device that allows website to list related "keywords" which will be used by search engines when executing a search. They can also be used by the unscrupulous to imbed keywords 'behind' their website so that, when someone searches for these words, they find unrelated information.

MySQL An open source relational database management system that uses Structured Query Language (SQL).

O

Open Source A program in which the source code is available to the general public for use and/or modification from its original design free of charge.

Order Confirmation An email to a customer confirming the placement of an order.

Orders Management System Software that enables online merchants to process, track, and organize orders.

P

Packing Slip A document usually included with a package, that displays the contents of the package. A packing slip does not include financial or account information.

Pay Per Click Marketing A form of advertising by which the marketer pays an organization every time his advertisement is clicked.

PHP A widely-used general-purpose scripting language that is especially well-suited for Web development and can be embedded into HTML.

Portal A portal is a website with links to other sites. General portals often include search engines (such as Yahoo or Excite) and there are also niche portals which cater to specific interests.

Privacy Policy A document that explains a merchant's policy regarding its customer's information.

Private Key A key for both encryption and decryption. It exists with a public key, but is kept secret by the owner.

Proxy Server Server that caches Web content in order to provide quicker access for users, when new requests are made for the same content.

Public Key A key for both encryption and decryption that is made available to the public. It has a mathematical relationship to the private key which means that information encrypted with one key can only be decrypted with the other.

Purchase Order (PO) A commercial document used to request someone to supply something in return for payment and providing specifications and quantities. A purchase order usually has an associated purchase order number used to identify the purchase order.

Q

Query A Request for Information to either a database application or search engine.

Referrer The URL or site address from which a site visitor came from.

R

Return Policy A document that explains a merchant's policy regarding the return of products by customers.

S

Scripting Language A programming language in which programs is a series of commands that are interpreted and then executed one by one. The programs do not need to be compiled.

Search Engine Optimization The process of increasing a web sites ranking in the search engine results pages. Search Engine Optimization includes modifying on page factors (content) and off page factors such as linking strategies.

Secure Servers Web servers that use encryption technology to prevent non-authorized users from intercepting and reading sensitive messages sent via the Internet. A secure page is identified by https: in the URL.

Secure Socket Layer (SSL) A protocol used to transmit documents over the internet in an encrypted format. An SSL connection will use the https protocol where as typical web pages are transmitted via an http protocol.

Security Certificate Information stored on a web server that is used by the SSL protocol to establish a secure connection with another computer. Security Certificates contain information regarding ownership, issuer, a unique serial number or other unique identification, and valid dates.

Server A central or host computer that provides access to data and services to more than one user at once.

Shipping Carrier A company used to transport packages. Common carriers include Canada Post, FedEx, DHL, UPS and USPS.

Spider A program used to fetch files from the internet for the purpose of indexing in search engines. Also called a web crawler, robot or bot, a spider follows links on web pages to find additional pages to index.

SQL Structured Query Language, used for accessing and modifying data in a database. There are numerous variations of the language. In web development, it is commonly used with a scripting language such as PHP.

Stock-keeping Unit (SKU) A unique identifier of a product. The SKU is used to track inventory and may or may not be shown to customers when shopping online.

Subtotal The net amount of an order. The cumulative price of an order's products. The subtotal excludes discounts, sales tax, and shipping charges.

T

Title Tag HTML tag used to define the title of a page. The title is displayed at the top of a Web browser and also used by many search engines as the title of a search result listing.

TLD Top Level Domain such as .org or .com.

U

Upload To transfer files from one's own computer to a server or host computer.

Uniform Resource Locator (URL) An address of a file located on the internet. A URL is composed of three parts 1) A protocol 2) A domain name and 3) a file name.

Unix An operating system developed in the 1960's that still leads the industry as the most common operating system for web servers.

User Session Each time a site visitor with a unique IP address enters a Web site during a specified period of time; usually 20-30 minutes, is counted as one user session. If the visitor exits the site and reenters within the specified period of time, it does not count as another user session.

W

W3C World Wide Web Consortium. An international industry consortium which develops common protocols that promote WWW evolution and ensure its interoperability. Standards that have been defined by the W3C include HTML, CSS and XML.

Whois An online service that provides publicly accessible information on the registered owner of a particular second-level ".com", ".net", and ".org" domain name.

Web Analytics The study of user activity on a web site or web application to understand how well it fulfills its objectives.

Web Host A business that provides web hosting services.

Web Hosting A term used for storing and maintaining files, email or domains on a server that is connected with Internet.

Web Server A server on the Internet that hosts websites.

Website Traffic The number of times a website is viewed by a unique visitor within a stipulated time.

X

XML A language which provides more efficient data delivery over the web. XML is similar to HTML and both are used to describe the contents of a Web page or file.

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