

# [Bachelor of business administration-bba semester v](https://assignbuster.com/bachelor-of-business-administration-bba-semester-v/)

Bachelor of Business Administration-BBA Semester V BB0025 — E Commerce — 2 Credits (Book ID: B0035/B0104) Assignment Set- 1 (30 Marks) Note: Each question carries 10 Marks. Answer all the questions. Q. 1 Let us examine the simple task when an employee of a company wants to buy a PC for his office. Company ï‚·ï€ Generate request for PC including the specifications. ï‚·ï€ Approval process has to pass through one or more than one person, depending upon the cost involved, the position and/or right of the person. ï‚·ï€ Once sanctioned, request passes on to the purchasing department. ï‚·ï€ Identify the item & supplier: Selection of appropriate model & supplier, with the help of office supply catalog. The person in the purchasing department has to check more than one catalog and contact the suppliers to find out the availability, present cost or may be latest version. ï‚·ï€ Issue a purchase order, fax or mail it to the supplier. Supplier ï‚·ï€ Verify the credit and sales history of the ordering company. ï‚·ï€ Check the warehouse for inventory; find out when it can be delivered to the desired location, within the time frame. Once the supplier is satisfied, then ïƒ˜ï€ Create a transportation and inform the warehouse. ïƒ˜ï€ Create an invoice for the PC and mail it. Finally PC reaches the office & the company pays the bill for PC by some standard means. Once the above given processes are digitized (if not, most of the steps) business can be done online in e-Commerce. Certainly e-Commerce results in reduction of procedural overheads, hence better performance at reduced cost and time. a. What are the procedural overheads you come across in the traditional commerce? The traditional commerce is where all three components are physical. In contrast, these components are all digital at the core of electronic commerce, where not only production, but also delivery, payment, and consumption (reading online or processing by a computer program) occur online. The remaining white areas are part of conventional electronic commerce, in which some of the components are digital. For example, products may be physical, but marketing and payment may be conducted online; products may be digital, but payments could be made via checks, or buyers may be reading printouts instead of screen outputs. The growing use of digital processes for business-to-business transactions and consumer marketing is evident in the figure, which shows that electronic commerce dominates the traditional market. Market activities, from production to consumption, occurring online, bypassing all paper-based transactions and traditional communications media, represent the future of electronic commerce. The Internet becomes not only an alternative communication medium, but a microcosm, or an electronic version, of physical markets with characteristics that are fundamentally different from physical markets. This digital world of business, in which market institutions, agents, and products are becoming " virtual" and native to the Internet, is also at the core of electronic commerce economics. The main difference between the digital world of business and the traditional, physical business world stems from the very nature of digitized products. However, there are many reasons why consumers too will behave differently in a networked market. For example, access to product information via the network using sophisticated computer programs will certainly affect the way consumers compare prices. In turn, efficient shopping will affect product choices, pricing strategies, and competitive efforts among sellers. Business organizations and relationships will also be affected as spatial and temporal limitations of the market are removed and replaced by different considerations of costs, efficiencies, and the mode of interaction on a network. In other words, the market environment, enabled by the open distributed Internet, resembles no other physical market. The physical distance and geographical topology of a market are replaced with network architectures and preference-based market territories. Thus, the objective is to investigate the economic aspects of this newly emerging market of electronic commerce by applying standard economic tools and by evaluating qualitative differences in economic efficiencies and organizational changes. b. Describe how ecommerce results in reduced cost and time. Over the past decade e-commerce has become the preferred method of shopping for a large number of consumers. Online shopping provides a vast array of benefits to the consumer that is otherwise unavailable in standard brick and mortar stores. \* QUICK, EASY AND CONVENIENT E-commerce has enabled the consumer to complete transactions from the comfort of their own home, transactions that would usually happen within the walls of a store. Transactions now take only minutes, rather than the hours included in physically getting to the stores. \* PRODUCT COMPARISONS Not only are consumers finding it quick and more convenient to shop online but they are also making more comparisons than ever. Comparing the price, delivery time and product specifications have never been simpler. Quickly browsing multi websites that stock products that suite your criteria is as simple as a Google search - consumers can now compare multiple products in minutes. \* SHORTER TIME FRAMES E-commerce allows for highly reduces lead times, as well as the more efficient delivery of products. \* INCREASED CONSUMER REACH E-commerce allows online merchants to stock a larger product range than a traditional store. This larger product range means more products are suited to a larger consumer base and hence greater possible reach. E-commerce stores are also available from anywhere, interstate and international customers are no longer a missed segment - this results in a massively increase possible consumer base. Q. 2 a. What are the different elements of E-C applications? b. Explain the different layers of OSI reference model The different layers of OSI reference model are: i) PHYSICAL LAYER The physical layer defines electrical and physical specifications for devices. In particular, it defines the relationship between a device and a transmission medium, such as a copper or fiber optical cable. This includes the layout of pins, voltages, line impedance, cable specifications, signal timing, hubs, repeaters, network adapters, host bus adapters (HBA used in storage area networks) and more. The major functions and services performed by the physical layer are: \* Establishment and termination of a connection to a communications medium. \* Participation in the process whereby the communication resources are effectively shared among multiple users. For example, contention resolution and flow control. \* Modulation or conversion between the representation of digital data in user equipment and the corresponding signals transmitted over a communications channel. These are signals operating over the physical cabling (such as copper and optical fiber) or over a radio link. Parallel SCSI buses operate in this layer, although it must be remembered that the logical SCSI protocol is a transport layer protocol that runs over this bus. Various physical-layer Ethernet standards are also in this layer; Ethernet incorporates both this layer and the data link layer. The same applies to other local-area networks, such as token ring, FDDI, ITU-T G. hn and IEEE 802. 11, as well as personal area networks such as Bluetooth and IEEE 802. 15. 4. ii) DATA LINK LAYER The data link layer provides the functional and procedural means to transfer data between network entities and to detect and possibly correct errors that may occur in the physical layer. Originally, this layer was intended for point-to-point and point-to-multipoint media, characteristic of wide area media in the telephone system. Local area network architecture, which included broadcast-capable multi-access media, was developed independently of the ISO work in IEEE Project 802. IEEE work assumed sub layering and management functions not required for WAN use. In modern practice, only error detection, not flow control using sliding window, is present in data link protocols such as Point-to-Point Protocol (PPP), and, on local area networks, the IEEE 802. 2 LLC layer is not used for most protocols on the Ethernet, and on other local area networks, its flow control and acknowledgment mechanisms are rarely used. Sliding window flow control and acknowledgment is used at the transport layer by protocols such as TCP, but is still used in niches where X. 25 offers performance advantages. The ITU-T G. hn standard, which provides high-speed local area networking over existing wires (power lines, phone lines and coaxial cables), includes a complete data link layer which provides both error correction and flow control by means of a selective repeat Sliding Window Protocol. Both WAN and LAN service arrange bits from the physical layer into logical sequences called frames. Not all physical layer bits necessarily go into frames, as some of these bits are purely intended for physical layer functions. For example, every fifth bit of the FDDI bit stream is not used by the layer. Following are the functions of data link layer:- \* Framing \* Physical addressing \* Flow control \* Error control \* Access control \* Media access control (MAC) iii) NETWORK LAYER The network layer provides the functional and procedural means of transferring variable length data sequences from a source host on one network to a destination host on a different network (in contrast to the data link layer which connects hosts within the same network), while maintaining the quality of service requested by the transport layer. The network layer performs network routing functions, and might also perform fragmentation and reassembly, and report delivery errors. Routers operate at this layer, sending data throughout the extended network and making the Internet possible. This is a logical addressing scheme — values are chosen by the network engineer. The addressing scheme is not hierarchical. The network layer may be divided into three sub layers: 1. Subnetwork access — that considers protocols that deal with the interface to networks, such as X. 25; 2. Subnetwork-dependent convergence — when it is necessary to bring the level of a transit network up to the level of networks on either side 3. Subnetwork-independent convergence — handles transfer across multiple networks. An example of this latter case is CLNP, or IPv6 ISO 8473. It manages the connectionless transfer of data one hop at a time, from end system to ingress router, router to router, and from egress router to destination end system. It is not responsible for reliable delivery to a next hop, but only for the detection of erroneous packets so they may be discarded. In this scheme, IPv4 and IPv6 would have to be classed with X. 25 as subnet access protocols because they carry interface addresses rather than node addresses. A number of layer-management protocols, a function defined in the Management Annex, ISO 7498/4, belong to the network layer. These include routing protocols, multicast group management, network-layer information and error, and network-layer address assignment. It is the function of the payload that makes these belong to the network layer, not the protocol that carries them. iv) TRANSPORT LAYER The transport layer provides transparent transfer of data between end users, providing reliable data transfer services to the upper layers. The transport layer controls the reliability of a given link through flow control, segmentation/desegmentation, and error control. Some protocols are state and connection-oriented. This means that the transport layer can keep track of the segments and retransmit those that fail. The transport layer also provides the acknowledgement of the successful data transmission and sends the next data if no errors occurred. OSI defines five classes of connection-mode transport protocols ranging from class 0 (which is also known as TP0 and provides the least features) to class 4 (TP4, designed for less reliable networks, similar to the Internet). Class 0 contains no error recovery, and was designed for use on network layers that provide error-free connections. Class 4 is closest to TCP, although TCP contains functions, such as the graceful close, which OSI assigns to the session layer. Also, all OSI TP connection-mode protocol classes provide expedited data and preservation of record boundaries. Detailed characteristics of TP0-4 classes are shown in the following table: Feature Name | TP0 | TP1 | TP2 | TP3 | TP4 | Connection oriented network | Yes | Yes | Yes | Yes | Yes | Connectionless network | No | No | No | No | Yes | Concatenation and separation | No | Yes | Yes | Yes | Yes | Segmentation and reassembly | Yes | Yes | Yes | Yes | Yes | Error Recovery | No | Yes | Yes | Yes | Yes | Reinitiate connection (if an excessive number of PDUs are unacknowledged) | No | Yes | No | Yes | No | Multiplexing and demultiplexing over a single virtual circuit | No | No | Yes | Yes | Yes | Explicit flow control | No | No | Yes | Yes | Yes | Retransmission on timeout | No | No | No | No | Yes | Reliable Transport Service | No | Yes | No | Yes | Yes | v) SESSION LAYER The session layer controls the dialogues (connections) between computers. It establishes, manages and terminates the connections between the local and remote application. It provides for full-duplex, half-duplex, or simplex operation, and establishes check pointing, adjournment, termination, and restart procedures. The OSI model made this layer responsible for graceful close of sessions, which is a property of the Transmission Control Protocol, and also for session check pointing and recovery, which is not usually used in the Internet Protocol Suite. The session layer is commonly implemented explicitly in application environments that use remote procedure calls. On this level, Inter-Process communication happen (SIGHUP, SIGKILL, End Process, etc.). vi) PRESENTATION LAYER The presentation layer establishes context between application-layer entities, in which the higher-layer entities may use different syntax and semantics if the presentation service provides a mapping between them. If a mapping is available, presentation service data units are encapsulated into session protocol data units, and passed down the stack. This layer provides independence from data representation (e. g., encryption) by translating between application and network formats. The presentation layer transforms data into the form that the application accepts. This layer formats and encrypts data to be sent across a network. It is sometimes called the syntax layer.[5] The original presentation structure used the Basic Encoding Rules of Abstract Syntax Notation One (ASN. 1), with capabilities such as converting an EBCDIC-coded text file to an ASCII-coded file, or serialization of objects and other data structures from and to XML. vii) APPLICATION LAYER The application layer is the OSI layer closest to the end user, which means that both the OSI application layer and the user interact directly with the software application. This layer interacts with software applications that implement a communicating component. Such application programs fall outside the scope of the OSI model. Application-layer functions typically include identifying communication partners, determining resource availability, and synchronizing communication. When identifying communication partners, the application layer determines the identity and availability of communication partners for an application with data to transmit. When determining resource availability, the application layer must decide whether sufficient network or the requested communications exist. In synchronizing communication, all communication between applications requires cooperation that is managed by the application layer. Some examples of application-layer implementations also include: \* ON OSI STACK i) FTAM:- File Transfer and Access Management Protocol ii) X400 Mail iii) Common Management Information Protocol (CMIP) \* ON TCP/IP STACK i) Hypertext Transfer Protocol (HTTP) ii) File Transfer Protocol (FTP) iii) Simple Mail Transfer Protocol (SMTP) iv) Simple Network Management Protocol (SNMP) Q. 3 Summarize the future directions of E-commerce. Electronic commerce on the internet is still at an early stage of development. The evolution commerce will be influenced by all sorts of interested parties. If anything regarding the future of electronic commerce is certain, its that this situation will soon change for the better. OBJECTIVES OF E-COMMERCE \* Internet and private Nets \* Security \* Payment and other communication system THE INTERNET VS PRIVATE NETS The internet has been able to meet the demands of its users. Highly publicized service outages from respected Internet service providers, such as a Netcom, At& Torldnet etc. part of the internet, bringing into question the robustness of the internet for business uses. Stability of internet must be considered. The protocols are being developed to allow internet users to reserve bandwidth for applications, and for prioritized traffic, for example, the ReSource reserVation Protocol, RSVP, has been developed to help reserve bandwidth for multimedia transmissions such as streaming audio. Video and video conferencing, this same protocol can be used to priority e-mail for EDI messages or FTP for file transfers. ISP’s are also starting to offer their own end-to-end networks across the United States independently to the internet’s main backbone, but still link to it is needed. Aimed at businesses, these networks can be used to speed along summer internet traffic. These private commercial networks also make easier for companies to form Virtual Private Networks (VPNs) with added security, replacing private corporate networks can be less costly than leased-line net-works, even with the additional rates incurred, allowing for communication with other partners and customers without requiring special set ups. SECURITY There are many options for securing communications on the internet. A great deal of work is being done with public key cryptography, and this will continue to lead in the market-place. Nevertheless, there is no single dominant solution in a wide field of options and proposals. Security market has yet to determine the most appropriate level to implement security options. At the moment solutions are available for use at the application level, at the session level. Defacto standards are evolving rapidly’ SSL for protecting data transmitted over the web and S/MIME and PGP for protecting e-mail messages. Many developers of security products have been focusing narrowly on either their individual applications or on a limited range of applications. More application using cryptography for electronic commerce, have to face multiple digital certificates in different formats — at least until some standard is developed. Initiatives, like CryptoAPI and Intel’s Common Data Security Architecture (CDSA) are an attempt to provide layered security services that make it easier to share encryption algorithms and digital certificates between applications rather than write the required software from scratch. INFRASTRUCTURE Although the internet’s infrastructure has evolved over 20 years, it has remained fairly decentralized. Many of the technologies covered have yet to establish the type of robust, secure, easy-to-access, and easy-to-use infrastructure that is required for daily business use. Notable among these components still in an embryonic stage are electronic payments systems, digital certificates and public keys. For the past few decades banks and institutions that offer credit cards have created national and global electronic infrastructure for electronic funds transfers and credit card authorizations. These infrastructures operate over private networks and at least for the near term, are unlikely to move to the internet. But these same institutions are opening gateways between their services and the internet, making it easier for businesses to connect to their customer base and offering new services by embracing the internet as another communication medium, thereby extending their own infrastructures. New commercial endeavors are linking to existing financial systems but lack of interoperability remains a problem. Initiatives like developers are going their own individual ways, and may propose their own solutions before JEPI gets sufficient backing among both developers and users. DIGITAL CASH Digital cash intended to be the digital equivalent of real cash, each bank issues its own electronic cash tokens that are not compatible with systems used by other banks. Worrying about exchanging digital cash between banks even within the same country would be intolerable. This incompatibility of digital cash systems will remain a problem for consumer-to-business commerce for the next few years at least, but not for business-to-business commerce. EDI is a standardized way of transferring purchase and financial information, one that is usually negotiated between business partners before any transactions occur. This approach of negotiating procedures will extend to other businesses as they use EDI over the internet and these businesses are likely to follow similar procedures with payment systems other than EDI. In the absence of suitable infrastructures for these other payment systems, intermediaries such as Nets Inc. will continue to provide standardized methods of handling financial transactions between buyers and sellers. Digital certificates and public key systems have no pre-existing trust network comparable to existing financial infrastructures. Everything needed for the distribution and verification of digital certificates is being built from the ground up. However a fully developed hierarchy of certificate authorities has yet to be established, furthermore, interoperability between certificate authorities is not guaranteed as more than one public key algorithm can be and is employed. And also infrastructures must be built to handle a high volume of digital certificates and key pairs. SMART CARDS Although smart cards have been around for more than a decade, they have not yet seen widespread use. Pre-paid or stored-value cards are currently in use for public telephones, tollbooths and mass transit systems in the US and overseas. But the real impact of e-commerce especially tied to the internet will come with the development of smart cards that include an embedded microprocessor. These smart cards will not only be used for internet based purchase but will also be able to serve as electronic purses that can be used for everyday purchases at stores. The technology to support electronic commerce using smart cards is still being developed and it is being filed-tested on a limited basis. the Mondex smart cards use the digital cash system developed by David Chaum and Digicash. ONLINE CATALOGS Online catalogs are likely to continue to be an important part of electronic commerce for both business-to-consumer commerce and business-to-business commerce. Dynamically generated custom catalogs search and draw data from corporate database which will be crucial and standard way of doing things for some time. Custom catalogs dynamically generated from corporate databases will be the norm. Customers visit a company’s website to find out details about the products and services it offers, so that they can take their decision. EDI The original electronic commerce applications using networks are commonly referred to as EDI. Many large corporations have implemented EDI and they are routinely using it with their suppliers to simplify management of their supply chains and the handling of their financial transactions. The internet offers a low-cost alternative for transmitting EDI data with VAN. By itself, this won’t make EDI more appealing to smaller businesses because they would still need to integrate EDI data with their internal systems but it will help to further the acceptance of EDI. ELECTRONIC MAIL Although the World Wide Web has received a lot of focus, other internet-based services such as electronic mail can be equally important to electronic commerce. For example, EDI VAN’S routinely use e-mail for transferring EDI data between partners. In the past, business have been reluctant to use internet-based e-mail for electronic commerce because it lacks the necessary security, directory services and other options businesses have come to rely on. But that’s changing as newer protocols are being developed by the IETF. MICRO TRANSACTIONS Although micro transactions and micro payment schemes have been mentioned a number of times, they are both certainly technologies that are still in their infancy. Limited pilot projects are now underway to test some of the technologies proposed for micro payments. Cybercash with its Cybercoin software is the first company to offer a commercial system that supports micro transactions. Funds for these cash transactions typically from 25 are drawn from a consumer’s existing bank account. Cybercash has already initiated a number of strategic alliances to support the system. Micro transactions using cybercoin software are also being tested. SOFTWARE AGENTS One of the hot and perhaps overhyped technologies advanced over the past few years has been software agents, self-learning programs that users can instruct to perform acts on their behalf. A variety of uses for software agents have been proposed. Two of immediate interest to electronic commerce are retrieving selected products information and negotiating the sale of an item. An internet software agent developed by Arthur Anderson Inc. has already demonstrated the first task: their software agent accesses date from various Web-based audio CD dealers to find the best price for a particular selection. Similar agents could be constructed to visit numerous online catalogs extract information on selected products and present that data to the user in a personalized buyer’s catalog. Sales negotiations are a more complex process and agents capable of performing such tasks are still in the research phase. INSTITUTIONS Technology alone doesn’t provide answers to all of the problems. Whatever develops will have to function within society. Making e-commerce really work will depend as much on what our governing and financial institutions do as it will on the technologies that develop. CENTRES OF TRUST Trust between the buyer and seller is an important element in all financial transactions but it is difficult to establish in e-commerce. When companies conduct business with one another, reputations can be checked and verified independently. The element of trust required for B&B or B&C commerce are built upon by previous negotiations and transactions. GOVERNMENTS When it comes to money and commerce, governments always have something to say. Government agencies are struggling to balance an individual’s right to privacy with the need to monitor illegal actions such as money laundering. Government restrictions on exporting encryption software and hardware have eased slightly but still keep the global marketplace from being a level playing field, having the government or a trusted third party to keep a master encryption key may be a solution but it has not yet received popular support from developers or other nations. FINAL MARKET FORECAST The consumer-to-business market will continue to grow, driven by purchase of home computers and other Web-enabled devices as well as developments in new media for delivering increased bandwidth. Digital subscriber lines, satellite access and even Asynchrotance of e-commerce will increase then no longer requires the use of a personal computer when e-commerce extends to non-computer devices such as televisions, automatic teller machines, point-of-sale terminals and other devices linked to smart cards. Bachelor of Business Administration-BBA Semester V BB0025 — E Commerce — 2 Credits (Book ID: B0035/B0104) Assignment Set- 2 (30 Marks) Note: Each question carries 10 Marks. Answer all the questions. Q. 1 Explain Stretch principle Catering to these needs however requires much more than bricks and mortar; institutionally it requires redefining markets. This is what Lever is attempting. Its leader brand, Surf, is a laundry product. By introducing laundry services, the company is attempting to extend surf into a larger business of garment care. The extension called “ Surf laundry services" now being micro-piloted for about three months, offers washing, ironing, starching, mending and dry-cleaning all delivered at the consumer’s doorstep. The service standardizes on several firsts like a full-satisfaction guarantee, a call centre with a toll-free number, membership schemes and an imported garment tracking software as well as state of the art equipment. Currently being tested in Mumbai, the service will soon be extended in phases. Similarly in Lakme, Lever is stretching the market from beauty products to total beauty care. Its four existing “ Beauty Houses" in 4 cities did this in a limited way. The concept of “ Lakme beauty salon" is now being built upon this experience. Lever is now reportedly planning to set up 200 such salons in 40 cities across the country. It will rely on the franchise model for expansion. By redefining its market as “ complete garment care" or “ total beauty solution", Lever is hoping to capitalize on its strong leadership in both product categories. Stretching a brand into service is not just a function of evolving consumer needs. It is also considered a durable unique selling proposition in a market where straight product differentiation is becoming harder. How different after all, can one brand of paint be from another? Asian Paints was one company that understood the service aspect early. In the 80s it established leadership by putting in place an MIS that allowed its products to be available far faster than its competitors. Today, it is trying to extend this advantage into what is known as “ brand experience" In April this year, the company launched its help line as a consumer forum where one can call in with paint-related queries. The line can be accessed in 20 cities planning to paint immediately in the near future. It is a direct communication platform between the company and the consumer and brings Asian paints closer to the consumer. The company’s reasons go like this. Consumers today have not only become increasingly conscious of home décor, they also want information on different kinds of paints and finishes, budgeting and prices, advice on shade combinations, maintenance tips and so on. The focus of the help line is on what Asian Paints calls PPP (people planning to paints), a time when they need information most but don’t know how to get it. “ The idea was to change the role of the consumer from a passive onlooker to an active participant in the painting process". The service covers all sorts of questions- from shade consultancy; assistance in setting budgets for paints, choosing the right type of paint, to the various choices available. Apart from home painting-related solutions Asian Paints says that it is tailoring its offering to Indian tastes and preferences, local lighting and climatic conditions. “ This initiative also adds a critical service edge to Asian Paint’s brand equity". “ It reinforces the leadership status of Asian Paints which is constantly innovating and adding value for the consumer". The help line essentially increases Asian Paints involvement with the buyer. Taking this concept a step further is EID Parry’s Limited. Its ceramic division markets bathroom fittings and sanitary-ware such as tiles, washbasins and commodes under the Parry ware brand. Parry spotted an opportunity from research that showed that although a quarter of expenses on a bathroom go towards services such as plumbing and construction, many consumers do not have access to proper and reliable plumbing services. That gave Parry ware the idea to set up service calls across the country. The first such cell has started in Delhi. Apart from these, it is “ bringing out a manual on bathroom designs and usage tips to help the consumer plan the best bathroom". The company wants the consumer to consider Parry ware as a brand that has the consumer’s best interests in mind. “ Completion will undoubtedly want to follow suit but will require time to organize themselves". In the long run, the Parry ware division wants to provide “ total bathroom solutions". It is working on the assumption that those who build their homes may take advice from an architect or interior designer but their final purchase decision is always based on personal taste. “ The role of the influencer is being reduced". That’s where Parry ware thinks it can step in. by doing so, it will be in a position to control the environment in which it wants to present the product. As “ trying to reduce the role of the influencers and the idea of taking the first step towards forward integration has begun to make sense to them". Q. 2 What is the difference between system procedure and system function? Explain the different procedures and functions with their description. SYSTEM PROCEDURE: The system stored procedure are a collection of prewritten queries that provide information about the state of the server and database objects. System procedures are: \* Shortcuts for retrieving information from the system tables \* Mechanisms for performing database administration and other tasks that involve updating system tables Most of the time, system tables are updated only through stored procedures. A System Administrator can allow direct updates of system tables by changing a configuration variable and issuing the reconfigure with override command. The names of system procedures begin with " sp\_". They are created by the install master script. Types of system procedures: System procedures can be grouped by function, such as auditing, security administration, data definition, and so on. The following sections list the types of system procedures. USES OF SYSTEM PROCEDURES: \* System procedures used for user-defined messages \* System procedures are used for auditing \* System procedures used for security administration \* System procedures used for remote servers \* System procedures are used for managing databases \* System procedures used for data definition and database objects \* System procedures used for device management SYSTEM STORED PROCEDURE | DESCRIPTION | Sp\_help[object\_name] | Reports information about a database object | Sp\_helpdb[database\_name] | Reports information about a specified database or all databases | Sp\_helpindex[table\_name] | Reports information about the indexes on a table | SYSTEM FUNCTION: System functions provide a method for querying system tables from within. The system function is used to issue a command. Execution of your program will not continue until the command has completed. The system () function should not be used by programs that have set user (or group) ID privileges. The fork() and exec family of functions should be used instead. This prevents any unforeseen manipulation of the environment of the user that could cause execution of commands not anticipated by the calling program. There are three levels of specification for the system () function. The ISO C standard gives the most basic. It requires that the function exists, and defines a way for an application to query whether a command language interpreter exists. It says nothing about the command language or the environment in which the command is interpreted. IEEE Std. 1003. 1-2001 places additional restrictions on system (). It requires that if there is a command language interpreter, the environment must be as specified by fork () and exec. This ensures, for example, that close-on- exec works, that file locks are not inherited, and that the process ID is different. It also specifies the return value from system () when the command line can be run, thus giving the application some information about the command's completion status. Finally, IEEE Std. 1003. 1-2001 requires the command to be interpreted as in the shell command language defined in the Shell and Utilities volume of IEEE Std. 1003. 1-2001. SYSTEM FUNCTION | PARAMETER PASSES | RESULTS | DB\_ID | Name | Returns the database identification number | USER\_NAME | ID | Returns the user’s name | COL\_LENGTH | Column | Returns the column width | STAS\_DATE | Index | Returns the date that the statistics for the specified index were last updated. | DATALENGTH | Data type | Returns the number of bytes used to represent any expression. | Q. 3 Explain the steps to set up a website The following paragraphs describe the steps involved in setting up a website: a) DOMAIN NAME REGISTRATION When a business organization decides to set up its own website, it needs a unique domain name so that it can be identified in the Internet world. This domain name should preferably reflect the name of the organization. For example the bookstore, Brainmart would like to have their Web address as www. brainmart. com and all e-mail addresses of company employees could be ID@brainmart. com. Here . com is the domain used by commercial organizations. To register a domain name either. com, net. org and . edu we first need to ascertain whether the proposed domain name is still available or has already been registered by some other organization. This can be done by searching the database, which contains the list of all registered domain names. Domain names can be up to 26 characters long and cannot contain any characters other than letters, numbers and hyphens. A domain name cannot have any spaces and cannot begin or end with a hyphen. Organizations that wish to have the top-level domain in, have to register domain names with the National Center for Software Technology (NCST) Mumbai, the ID? Address of the machine on which the website is being hosted should also be obtained from the same organization. The domain Name Registration Agreement of InterNiC requires two domain name service to be listed for each domain name. These domain name servers (DNS) are used to determine IP numbers from domain names, so that the registered domain name may be contacted over the Internet. Two servers ensure that in the event of one of the same server machines becoming unavailable, the domain name is still reachable. b) WEB SERVERS Once the proposed domain name has been registered with the appropriate authority, the organization has to prepare itself for establishing its presence on the Internet. The organization has to setup a Web server to make information available on the Internet. These web servers should have appropriate software which allows production of web pages and their subsequent round-the-clock accessibility over the Internet. The organization’s web server then becomes one of the millions of web servers that are available over the Internet for users to access through their web browsers. Internal decisions have to be taken regarding what information and services will be made available over the Internet. This information has to be made available in Web pages which are generated using HTML. Some of the more popular web servers that are available are Apache, Microsoft, Netscape, O’Reilly and NCSA — the National Centre for Super Computing Applications. Any of these products can be used by an organization to web enable itself for the internet. The option of using a third party for hosting an organization’s website is also available. While there are organizations in the country that have availed the Internet services of VSNL to launch their own websites in the absence of ISPs, a number of Indian organizations have hosted their web services on web servers located abroad. c) REGISTERING THE WEBSITE WITH SEARCH ENGINES Once a website has been set up and all desired content created on it, the organization would want people to come and visit the website. It is also required that many people should be able to visit the website so that they may see what is being offered and make any report. People have to know of the existence of the website. There are different ways of promoting a website. These include mechanisms such as registering with search engines, advertising, newsgroup, newsgroup announcement and e-mail announcement to clients. Search engines on the web register websites along with their URL and keywords from the content of the web pages. A user connects to search engines such as those offered by Netscape, AltaVista and Yahoo and submits the query. If the query information matches the keywords registered for a website, that website will be identified. The site will then find a place in the results that will be displayed by the search engine as a result of the original query. Brainmart would like to popularize its website by providing the facility of ordering books online and employs various methods to promote the site and the products associated. It has registered with one of the search engines and when a user is searching for information on books, Brainmart would be listed out as one of the major bookstores.