The a task and the task is completed

Business, Management

The layered framework for the design of network systems that allow for communication across all sorts of computer systems is Open System Interconnection (OSI) 1. The OSI consists of seven stages that each layer is assigned a task and the task is completed independently.

Each stages has the clear and independent characteristics and task. Each stages also request upon the services of the stages below it and the method on separately machine connect at given layer are called peer-to-peer processes. Connection between machines is peer-to-peer process using the suitable to a given stage. The first stage is physical layer for ultimate transmission of digital data bits from the source device over network communications media to the destination device.

GSM GPRS modules function as cable connectors from hardware to the software. Data are transmitted using the type of signaling supported by the physical medium. The second layer is data link layer which provides reliable transfer of data across a physical network link. Different data link layer specifications define different network and protocol characteristics, including physical addressing, network topology and more. GPRS in this stage allows data to be stored in the packets and then transmitted in an efficient manner across the mobile network. The data link has divided into two sublayers which are Logical Link Control (LLC) and Media Access Control (MAC).

The data link layer manages communications between devices over a single link of a network in sublayer of LLC. Both connectionless and connection-oriented services used by upper-layer protocols can be support by LLC. The

MAC sublayer be able to make protocol access to the physical network medium. The specification defines MAC describe addresses, which enable several devices to uniquely recognize one another at the data link layer. The third stage is network layer that main task is to move packets from the starting source to the target host. Packetizing, fragmentation and reassembling, routing algorithm, addressing and internetworking are how to move the packets in this layer. As an example, addressing provides structured addresses to name networks uses an addressing scheme, Internet Protocol (IP) address. IP re-accumulates at the target host only and uses the field in the header as:· Data Unit Identifier (ID) · Data length· Offset · More flag The fourth layer is transport layer, which delivers data across network connections.

Transmission Control Protocol (TCP) and User Datagram Protocol (UDP) are the most used of network protocol. UDP is unreliable, unordered delivery with the no-frills extension of IP. TCP is reliable, in-order delivery with connection setup, flow control, and congestion control. Transport Packet Data Unit (TPDU) are transfer from transport entity to another transport entity that carry in packets which switched by network layer. The transport stage can supply the connection-oriented transport service and connectionless unreliable transport service. The fifth layer is session layer, which has functions as following:· Session management· Dialog management· Synchronization · Activity management· Exception handling Session management is managing a session which includes opening, closing and managing a session among end-user application methods. It handles the requests and responses between the two

applications. Dialog management decides whose turn to talk and session layer prevents them to send or receive data at simultaneously as in half-duplex mode.

Synchronization moves the two session entities into a known state. Synchronization deals with upper layer error which application, session, and transport layer. Activity management allows the users to delimit data into logical units called activities.

Each activity is independent of each other, can be processed on its own and might be used to delimit files of a multi-file transfer 2. Exception handling is a general purpose for reporting an error. Next layer is presentation layer, which concerned with preserving of information transferred across a network. It may represent the data in various ways, but the receiving peer will translate the encoding back into its original meaning.

It provides a several of coding and conversion functions that are practical to the application stage. These purposes to enable that information transferred from the application stage of one system would be understandable by the application layer of another system. The functions of the presentation layer are to 3:· Translate data – Convert data from the receiving format to a format understood and accepted by other layers· Encrypt data – Encoding of data in a way that is useless to readers who do not have both a decryption algorithm and secret key used by decryption algorithm· Manage data compression – Reasons of compressed data for less memory for intermediate node buffers, fewer packets to be handled, less time to send, less cost and increasing network throughput. The last layer is application

layer, to preserve the meaning of transmitted information between systems. Different applications and programming languages use different data types and different syntax. In other words, not all data types have universal formats and not all devices format data types the same way.

Examples of application layer protocols:· Domain Name System (DNS)· Remote login· Email· File transfer