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Course - MCA - 2nd Sem

Section - 'B'

Computer Networks Assignment - 01

Ques Discuss the history of Computer Networks?

Ans A computer network is a group of computers that has the potential to transmit, receive and exchange voice, data, and video traffic.

A network connection can be setup with the help of either cable or wireless media. In modern times, computer networks are very important as information technology is increasing rapidly all over the world. The network and data communication are the essential factors to rise information technology in the world as technology's advancement is on the system, including the gadgets. ARPANET began the networking long ago.

In 1957, when SPUTNIK satellite was launched by Russia. An agency named "Advanced Research Project Agency (ARPA)" was started by American,

and its first satellite was launched within 18 months after establishment. Then they used ARPANET to share the information on another computer. America's Dr. Vint Cerf has this all responsibility. Then, ARPANET came to India in 1969, and its name changed from Indian to Network.

For the United States Department of Defense, the funding of the design of the Advanced Research Project Agency (ARPANET) Network was began by ARPA. In 1969, the network began to develop on the basis of the developed designs in the 1960's. Below are the complete history of Computer networking :-

-) In 1961 - In this year, Leonard Kleinrock proposed of the earliest computer networks, which was the idea of ARPANET.
-) In 1965 - Donald Davies coined the term "Packet" to describe how to send data between computers on a network.
-) In 1969 - Although in 1969, the development of ARPANET began, officially started ARPANET in 1969. It was considered one of the first

Computers Networks in first two nodes, UCLA and SRI (Stanford Research Institute) were connected, and to use packet switching.

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-) In 1969 - On 29 Aug 1969, the first IMP and network switch were sent to UCLA. On ARPANET, the first data transmission was sent by using it.
-) In 1970 - NCP, stands for Network Core Protocol, released by the Steve Crocker and a team at UCLA for use with NetWare.
-) In 1971 - The first e-mail was sent to across a network to others by ^{Ray} Tomlinson.
-) In 1973 - While working at Xerox PARC, Robert Metcalfe developed the Ethernet in 1973. In the same year, ARPA deployed the first International Network Connection, known as SATNET.
-) In 1973, VoIP Technology and capabilities were officially introduced, which made a VoIP call.

However, until 1988, the software was not available for users that could make VoIP calls.

-) In 1974 - The use of first router was began, but they are not considered true IP routers.
-) In 1976 - Originally called a gateway, Vint Cerf developed the first true IP router.
-) In 1978 - The TCP/IP protocol was developed and invented by Bob Kahn for networks; it was developed with help from Vint Cerf.
-) In 1981 - In the United States, between IBM mainframe systems, BITNET was created in 1981 as a network. The US National Science Foundation developed the CSNET (Computer Science Network) in the same year 1981.
-) In 1983 - For using TCP/IP, ARPANET finished the transition. The first DNS implement by John Postel and Paul Mockapetris in 1983.
-) In 1986 - This is the year in which a backbone for ARPANET, the National Science Foundation Network was came online, which finally took the place of ARPANET in 1990. In the same year, with the original BITNET, BITNET II was introduced to deal

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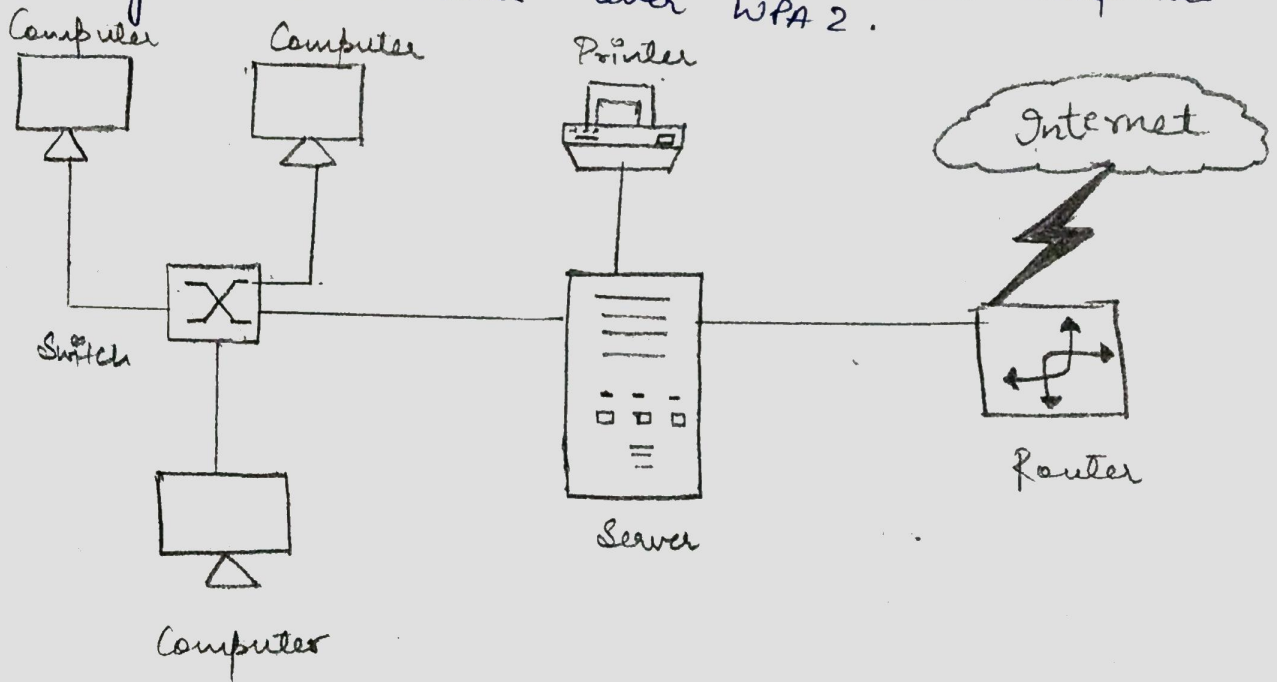
with bandwidth issues.

-) In 1988 - The first T1 backbone was included with ARPANET, AT&T, Lucent and NCR introduced the WaveLAN network Technology in 1988.
-) In 1990 - The first network switch was developed and introduced by a US network hardware company named Kalpana in 1990.
-) In 1996 - An IPv6 was introduced as an improvement over IPv4, as well as embedded encryption, improved routing.
-) In 1997 - The 802.11 standards, containing transmission speeds up to 2 Mbps, for Wifi were introduced.
-) In 1999 - The 802.11a standards, containing transmission speeds up to 25 Mbps to use the 5 GHz band was officially made.
-) In 2003 - 802.11g devices, contained transmission speed upto 20 mbps were available to public in January 2003. In the same year, for use with 802.11g, the WPA encryption protocol is released.

•) In 2004 - As a replacement for WPA, the WPA2 encryption protocol was introduced. By 2006, WPA2 certification was compulsory for all Wi-Fi devices.

•) In 2009 - 802.11n standard can operate on the 2.4 GHz and 5 GHz bandwidths and offer higher transfer speeds over 802.11a and 802.11g.

•) In 2018 - In January 2018, WPA3 encryption was released by the Wi-Fi Alliance, which comprises security enhancements over WPA2.



Computer Network Diagram