

Assignment No. 3

Ques. Explain IP packet format in brief.

Ans- $\xleftarrow{8\text{bit}} \quad \xleftarrow{8\text{bit}} \quad \xleftarrow{8\text{bit}} \quad \xleftarrow{8\text{bit}} = 32\text{bit}$

Mandatory	1	Version 4	HL EN 4	Type of Service DSCP 8	Total Length - 16	
	2	Identification 16			Flags 3	Fragment offset 13
	3	Time to live TTL 8		Protocol 8	Header checksum 16	
	4	Source IP address 32				
	5	Destination IP address 32			Optional and Padding	

If we add total bits = 160 bits

$$\therefore \frac{160}{8} = 20 \text{ byte.}$$

Header size

It contains 12 fields of different length in its fixed 20 bytes part and one optional part that may contain 0 or more words along with padding.

- IPv4 works at network layer.
- IPv4 header is connectionless protocol.
- It is a datagram service. It means it is equipped with all information which is required to reach its destination point.

- Datagram

Header size - 20-60 Bytes
min max

Payload - 0-65515 Bytes
(Actual data to be sent)

}

Total size of datagram

= 20 + 65515

65535

Max size of Datagram = 216

Q. - what is dotted decimal notation?

Ans -

Dotted decimal notation is a system of presenting numbers that is a little different from the common conventions in arithmetic as it is taught in schools. Specially, dotted decimal notation is used in various IT contexts, including in internet Protocol addresses.

The dotted decimal notation system used so commonly in IP addressing is just one of several choices for representing numbers differently. Another common one is the hexadecimal system, in which traditional numbers are augmented by letters of the alphabet in a base-16 system.