Explain the use of RTP and RTCP protocols.

Use of RTP and RTCP:-

1. RTP can be used to transfer Real time data like voice packets.
2. RTP can be used with RTCP which makes it possible to monitor data.
3. Packet loss can be detected by RTP using Sequence number

RTCP provides Qos feedback :- Packets lost, round trip time.

Describe the format of RTP and RTCP packets.

The 32 bits of RTP packet format is as follows:- (L to R)

Bit 0-1:- Indicates version, currently 2
Bit 2:- P- indicates padding bytes
Bit 3:- X- Indicates presence of extension header
Bit 4-7:- CC- Contains number of CSRC identifiers that follows the header
Bit 8:- M- Current data has some special relevance (if set)
Bit 9-15:- PT- Indicates format of payload
Bit 16-31:- Sequence number
Timestamp: - 32bits – time stamp of packet
SSRC- Synchronization source identifier uniquely identifies the source of a stream.
CSRC -Contributing source IDs enumerate contributing sources to a stream which has been generated from multiple sources
Extension header: - first 32 bit word contains profile specific identifier and length specifier

The 32 bits of RTCP header format is as follows:- (L to R)
Bit 0-1:- Indicates version, currently 2
Bit 2:- P- indicates padding bytes
Bit 3 to 7:- Count of number of reception report blocks
Bit 8 to 15:- Type: - Determined RTCP packet type. Type can take values from 0 to 255
16 to 31:- Length- Length of RTCP packet - 1

SR: - Sender Report for transmission and reception from active senders

RR: - Receiver report for reception from in active senders

SDES: - Source description items

BYE- indicates end of participation

APP: - Application specific functions