**AIM:**

Implementation of stop and wait protocol.

**THEORY:**

*Stop and Wait* is a reliable transmission flow control protocol. This protocol works only in Connection Oriented (Point to Point) Transmission. The Source node has window size of ONE. After transmission of a frame the transmitting (Source) node waits for an Acknowledgement from the destination node. If the transmitted frame reaches the destination without error, the destination transmits a positive acknowledgement. If the transmitted frame reaches the Destination with error, the receiver destination does not transmit an acknowledgement. If the transmitter receives a positive acknowledgement it transmits the next frame if any. Else if its acknowledgement receive timer expires, it retransmits the same frame.

1. Start with the window size of 1 from the transmitting (Source) node

2. After transmission of a frame the transmitting (Source) node waits for a reply (Acknowledgement) from the receiving (Destination) node.

3. If the transmitted frame reaches the receiver (Destination) without error, the receiver (Destination) transmits a Positive Acknowledgement.

4. If the transmitted frame reaches the receiver (Destination) with error, the receiver (Destination) do not transmit acknowledgement.

5. If the transmitter receives a positive acknowledgement it transmits the next frame if any. Else if the transmission timer expires, it retransmits the same frame again.

6. If the transmitted acknowledgment reaches the Transmitter (Destination) without error, the Transmitter (Destination) transmits the next frame if any.

7. If the transmitted frame reaches the Transmitter (Destination) with error, the Transmitter (Destination) transmits the same frame.

8. This concept of the Transmitting (Source) node waiting after transmission for a reply from the receiver is known as STOP and WAIT.



**PROGRAM: (Stop and Wait Protocol)**

**Output**