For Stop-and-wait protocol:

In this protocol we send a packet and wait for the acknowledgement, in case of failure/ negative acknowledgement, we resend the packet. This happens until the sender receives the positive acknowledgement from the receiver. This happens through two different sockets, sending and receiving packets and thence acknowledgements. This is a UDP protocol.

To execute this, navigate to the folder and update the sender file with your image path and the retransmission time you want to have it for.

1) Open terminal and navigate to folder
2) Execute 'sudo mn' to enter the mininet environment.
3) Open xterm h1 and xterm h2
4) Now update both h1 and h2 for:
      a) Bandwidth: sudo tc qdisc add dev h(1)(2)-eth0 root netem rate (bandwidth) limit
        (limit value)
      b) Packet Loss: sudo tc qdisc change dev h1-eth0 root netem loss (value)% c)
Propagation delay: sudo tc qdisc change dev h1-eth0 root netem loss (value)% 5) Now run python3 receiver.py on h2
6) Run python3 sender.py on h1
7) You will be able to see the image that is formed.

Here the image is sent in packets which contain 1024 bytes of size. Here to add 2 bytes sequence number and 2 bytes of flag the file is read 1020 bytes only per read. And transmitted accordingly.