Internet Technology: Project 4 Report

1) **Team Details**
   Clearly state the names and needs of your team members (There are 2 of you)
   Name: Prachiti Atigre **NetID:** pka24
   Name: Ujani Patel **NetID:** ukp10

2) **Collaboration:**
   Who did you collaborate with on this project? What resources and references did you consult?
   We did not collaborate with any other individuals on this project.
   The resources and references that we consulted were:
   - Recitation documents
   - Simulation

3) **Is there any portion of your code that does not work as required in the description above?**
   No. All the requirements from the document have been implemented in our code

4) **Did you encounter any difficulties? If so, explain.**
   The difficulty that we encountered was how to run the test cases. It was quite different as compared to the past projects since we were using multiple flags for acknowledgment loss and packet loss. Another difficulty that we encountered was how to implement pipeline reliability. It took us some time to understand how it worked and therefore, we referred to some online simulations to understand how the packets and acknowledgments were getting sent.

5) **Describe two technical observations or facts you learned while working on this project. Please answer in specific and precise terms. Your observations could relate to topics including reliable data delivery in general, your implementation of it in this project, reliable delivery in TCP, using UDP sockets, or other topics that are relevant to your software and implementation in this project. Please ensure your responses are clear, specific, and technical.**
   When we were analyzing the test cases outputs, we noticed that the last ACK would never get dropped. We believe that it is specific to this code since in general, when we used the simulation to understand the concept, the last ACK would get dropped.
   Another thing that we observed was that when we transmitted the entire window before checking if there was any readable data, it gave an assertion error. That error was fixed when we transmitted the entire window after checking if the acknowledgment was greater than the last_acked.