**Project 2:**

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**Task 1:**

In this task MSS is 500 and probability is 0.05. Window size N is increased from with powers of 2 and time required for fil transfer is calculated.

When window size is small, there will be timeouts as acknowledgments may not be received in the specified time. When window size is large, one packet loss will lea to retransfer of all the packets from the lost packet, therefore time to send the file will again be very high. Therefore, as we can see from the graph, a medium window size will have the least file sending time.

**Task 2:**

In this task MSS is varied from 100 to 1000, N=64 and p=0.05.

As MSS increases, the total number of packets sent are less as large chunk is sent, therefore time required to transfer will be less. As we see from the graph it is an exponential decrease in time.

**Task 3:**

In this task MSS is 500, N is 64 and error probability is increases from 0.01 to 0.1

If the rate at which there is an error (error probability) increases, the time required to transfer the file will also increase. We can see this from the graph, there is an almost linear relationship between probability and time.