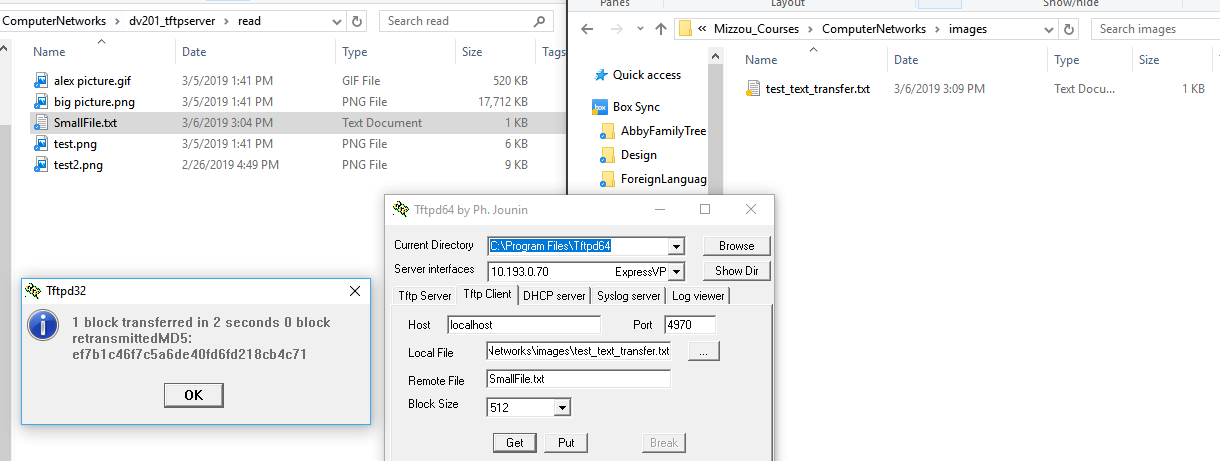
DV201 (Software Engineering) Assignment 3 (TFTP Server)

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# Problem 1 (TFTP Server):

**Read Request From Client with file less than 512 Bytes (Screenshot):**

In the following test the windows explorer window shows the contents of the “read” directory for the tftp server. This directory contains all the available files that the client user can get. The explorer window on the right shows the local directory for the client user where the resultant image was stored. The TFTP client at the bottom shows that we will connect to localhost on port 4970 and in this case get the file SmallFile.txt. Since the file is less that 512 bytes it only requires 1 block to transfer. When the “Get” button is pressed the transfer begins and the popup message indicates that the 1 block has been successfully transferred and the file on the local filesystem is shown on the left (test\_text\_transfer.txt)



**Socket and sendSocket:**

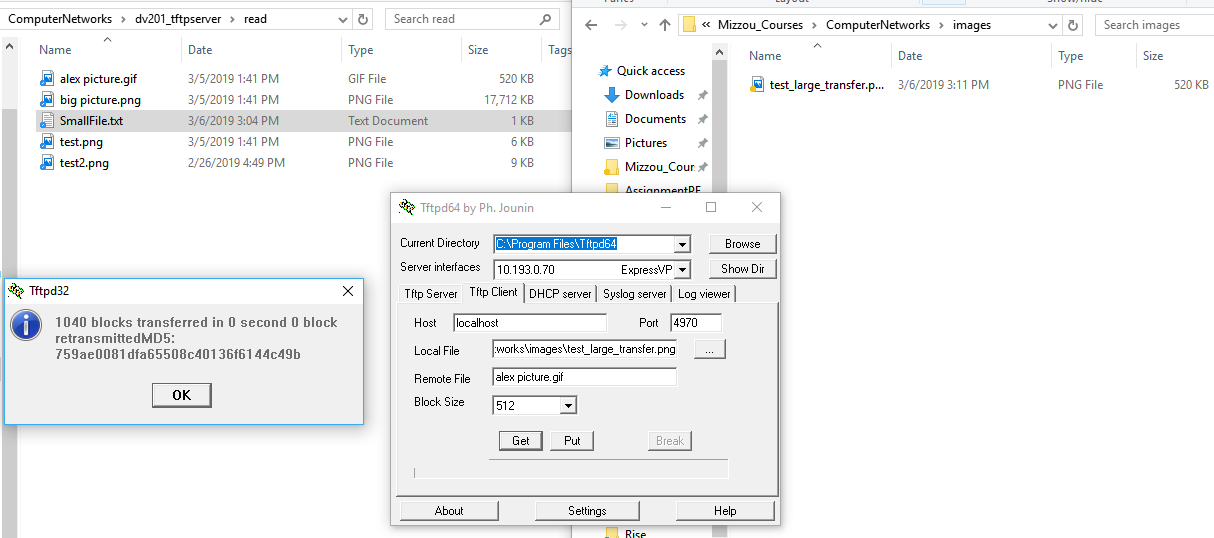
The reason that the server uses socket and sendSocket is that socket is used to start the server on a known port so incoming connections can be accepted. sendSocket is then used when a connection is accepted to open a new port so that the file/data can be transferred from the server to the client. This is done so that the known port the server runs on can be open to accept new incoming requests while the server is handling/transmitting files to clients on other ports. sendSocket picks any available port while socket uses a well known port so that users know which port to access the server on.

# Problem 2:

**Multiple Read Requests from Client with files greater than 512 Bytes (Screenshot):**

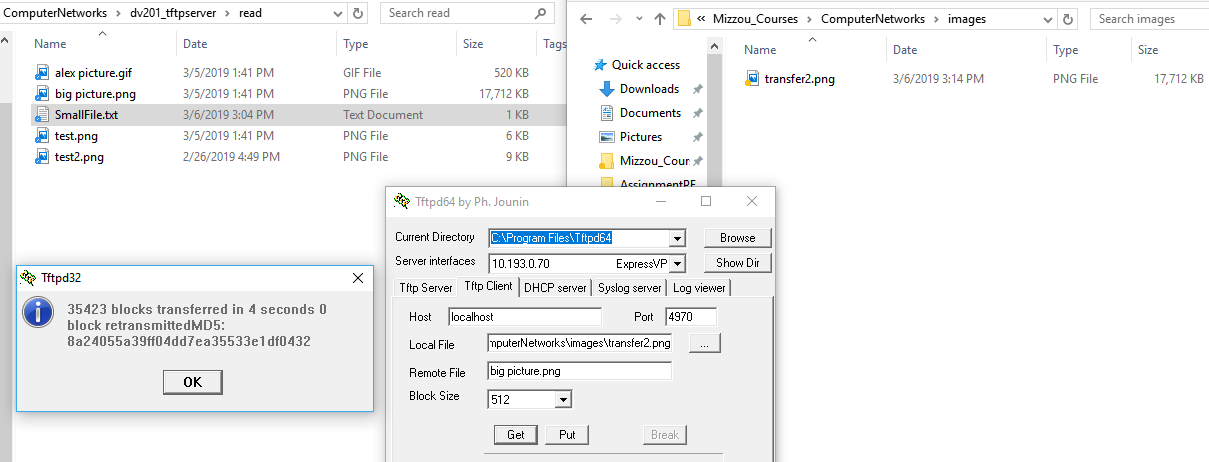
**Large Transfer 1:**

This test was preformed in the same way as the test for problem 1 but this time with larger files. As you can see in the confirmation screenshot, for the file “alex picture.gif”, which is 520 KB in size, there were 1040 blocks transferred. The completed transfer to the local system is shown in the right explorer window. You can see that the size of the file on the server and on the local filesystem is the same.



**Large Transfer 2:**

As you can see in the confirmation screenshot, for the file “big picture.png”, which is 17,712 KB in size, there were 35423 blocks transferred. This transfer took 4 seconds because of how large the image was but the server was still capable of handling the transfer. The completed transfer to the local system is shown in the right explorer window. You can see that the size of the file on the server and on the local filesystem is the same.



**VG-Task 1:**

# Problem 3: