ECEN 602: Network Programming Assignment 3
TFTP SERVER
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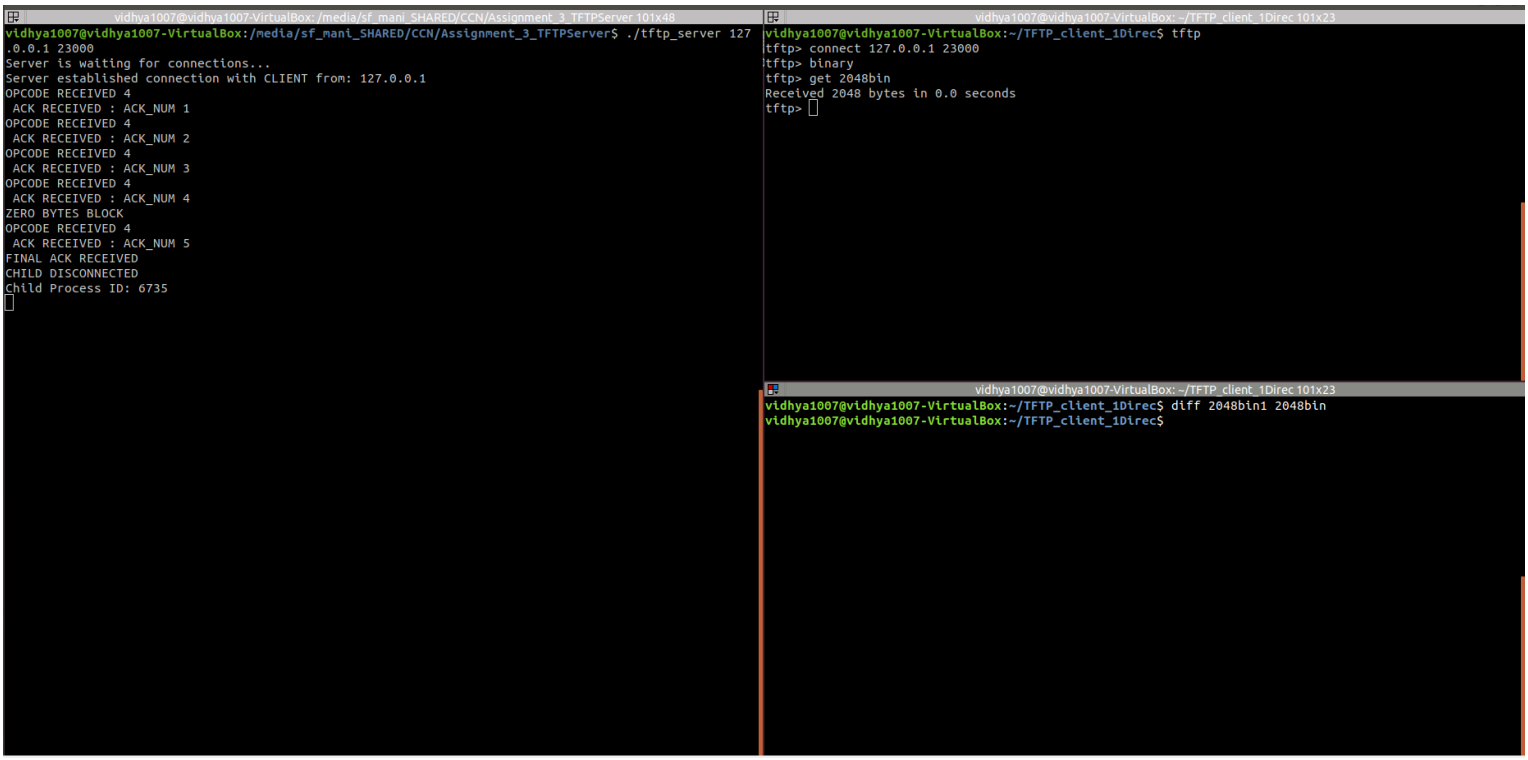
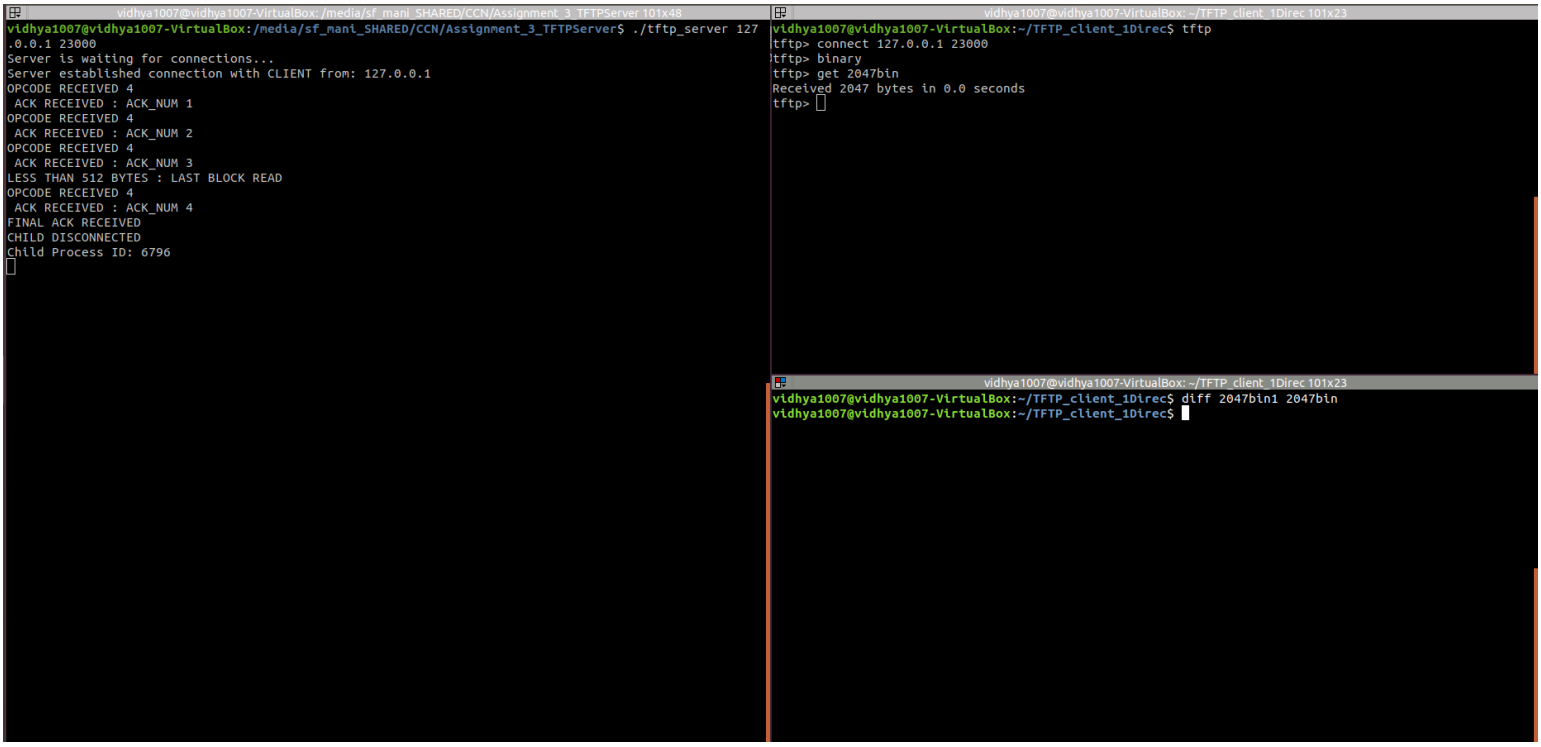
1) TESTCASE 1: TRANSFERRING A 2048 BYTE BINARY FILE



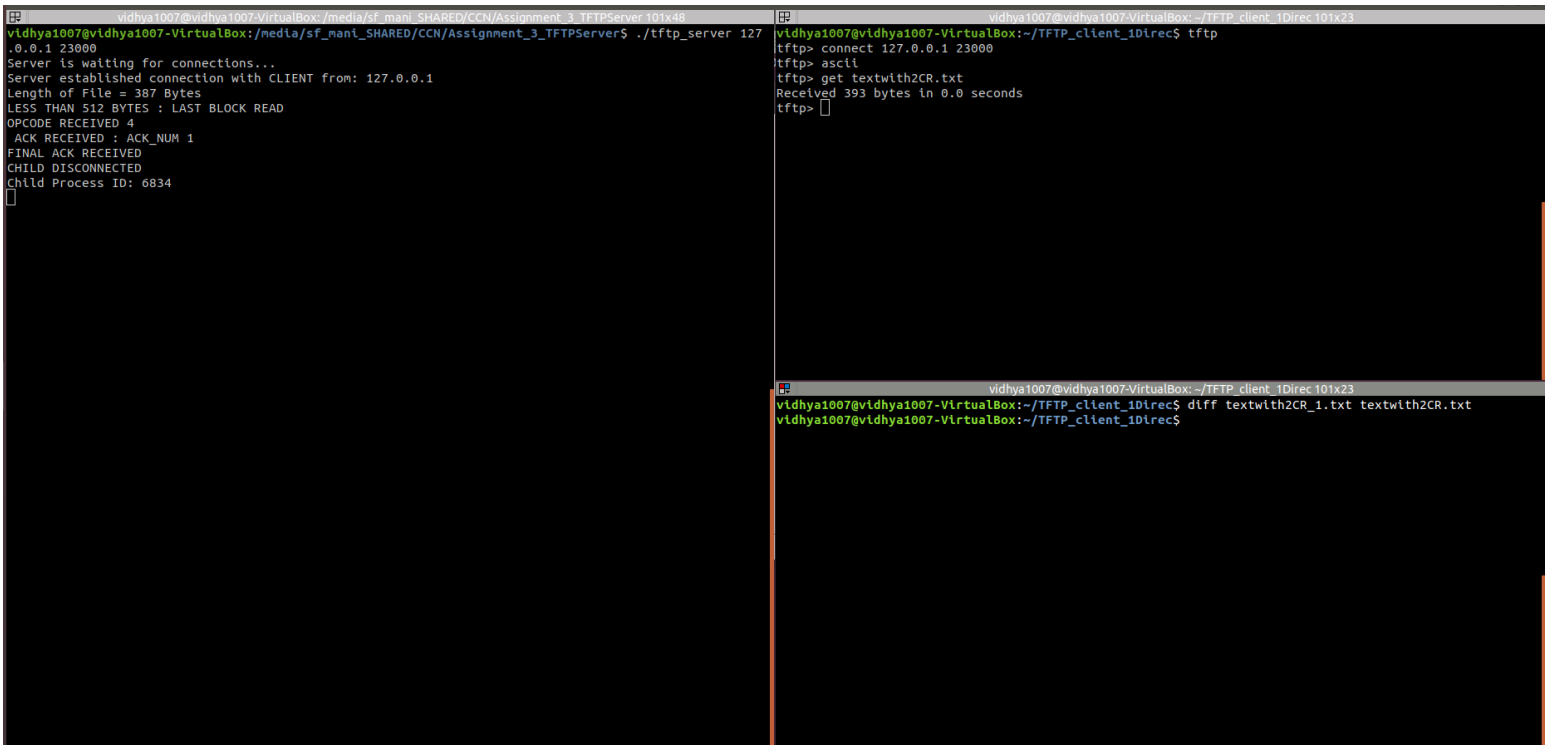
A random 2048 byte binary file was generated. Server is run, then tftp native linux client is used which connects to the server and requests to get the file with filename. Once the file is successfully transferred, the file in the client directory is renamed to 2048bin1 and the file from the server directory is copied to this directory and are compared using diff. Since diff didn't return any differences, the file was successfully transferred.

2) TESTCASE 2: TRASNFERRING A 2047 BYTES FILE (NOT A MULTIPLE OF 512)



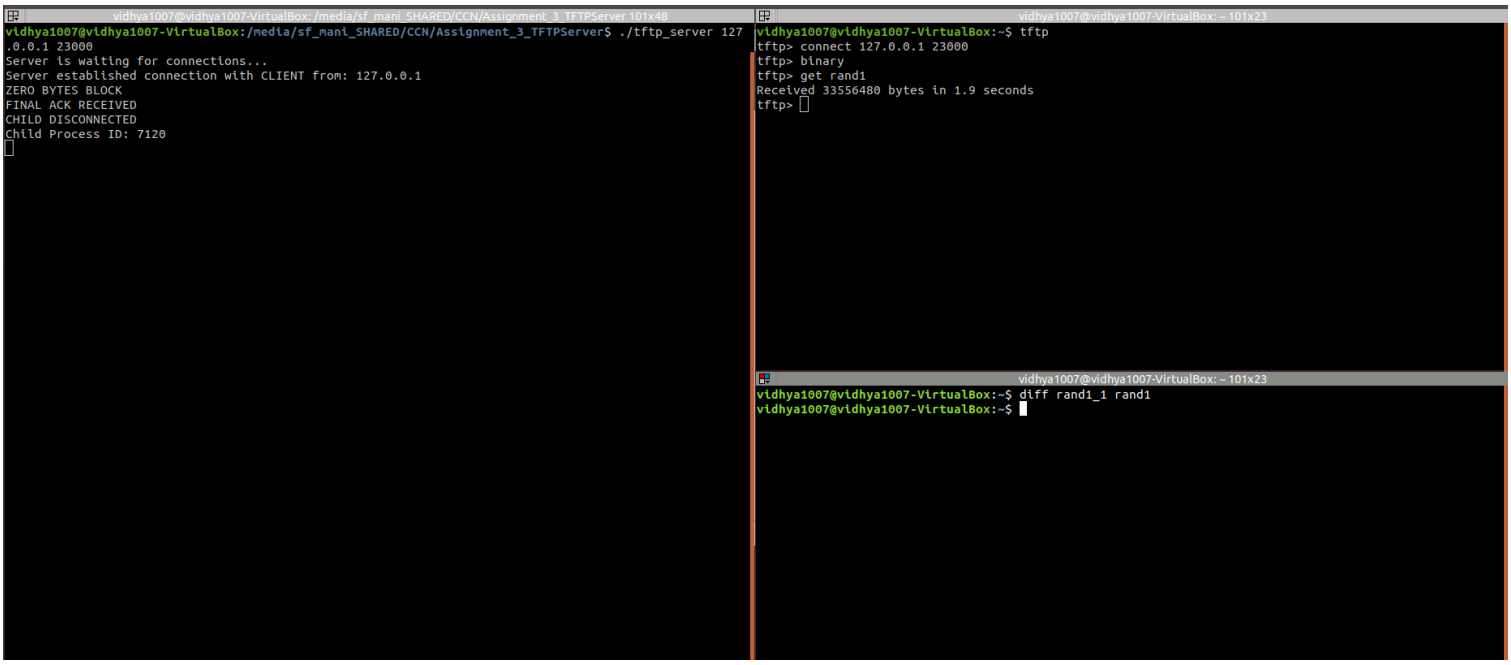
A 2047 BYTE binary file was transferred in a similar way. However, since it isn't a multiple of 512 bytes which is the size of each block, the last datagram consisted of less than 512 bytes which indicated the end of file. Similarly, the two files were put in the same directory and using diff command were checked if were the same. The diff did not return any difference thus proving successful transmission of 2047bin file.

3) TESTCASE 3: TRANSFERRING A NETASCII FILE WITH 2 CRs



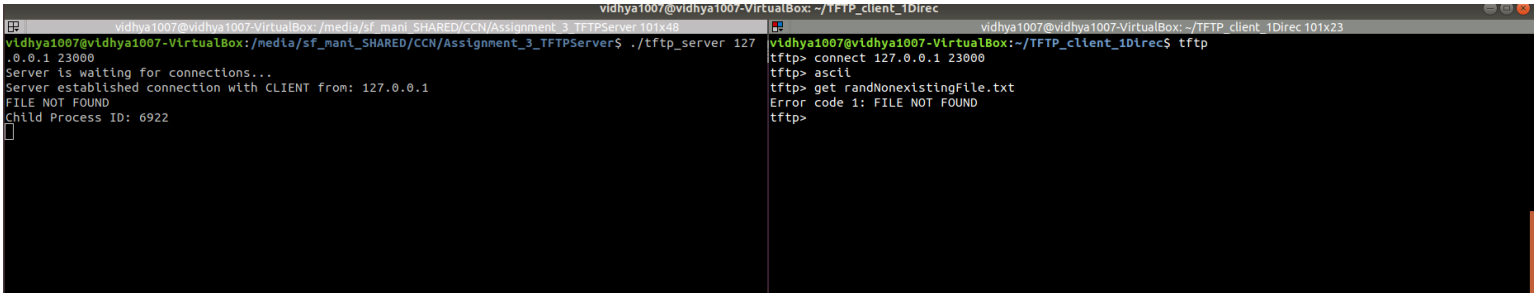
A text file named textwith2CR was created at the server directory. The content includes two new line characters. The tftp client mode was set to ASCII and a request was made to get the file textwith2CR.txt. The received files were compared using diff in a similar fashion like the above test cases. The second screenshot shows both the files opened and how the lines were exactly matching ensuring successful file transmission.

4) TESTCASE 4: TRANSMISSION OF A VERY LARGE FILE (34 MB)



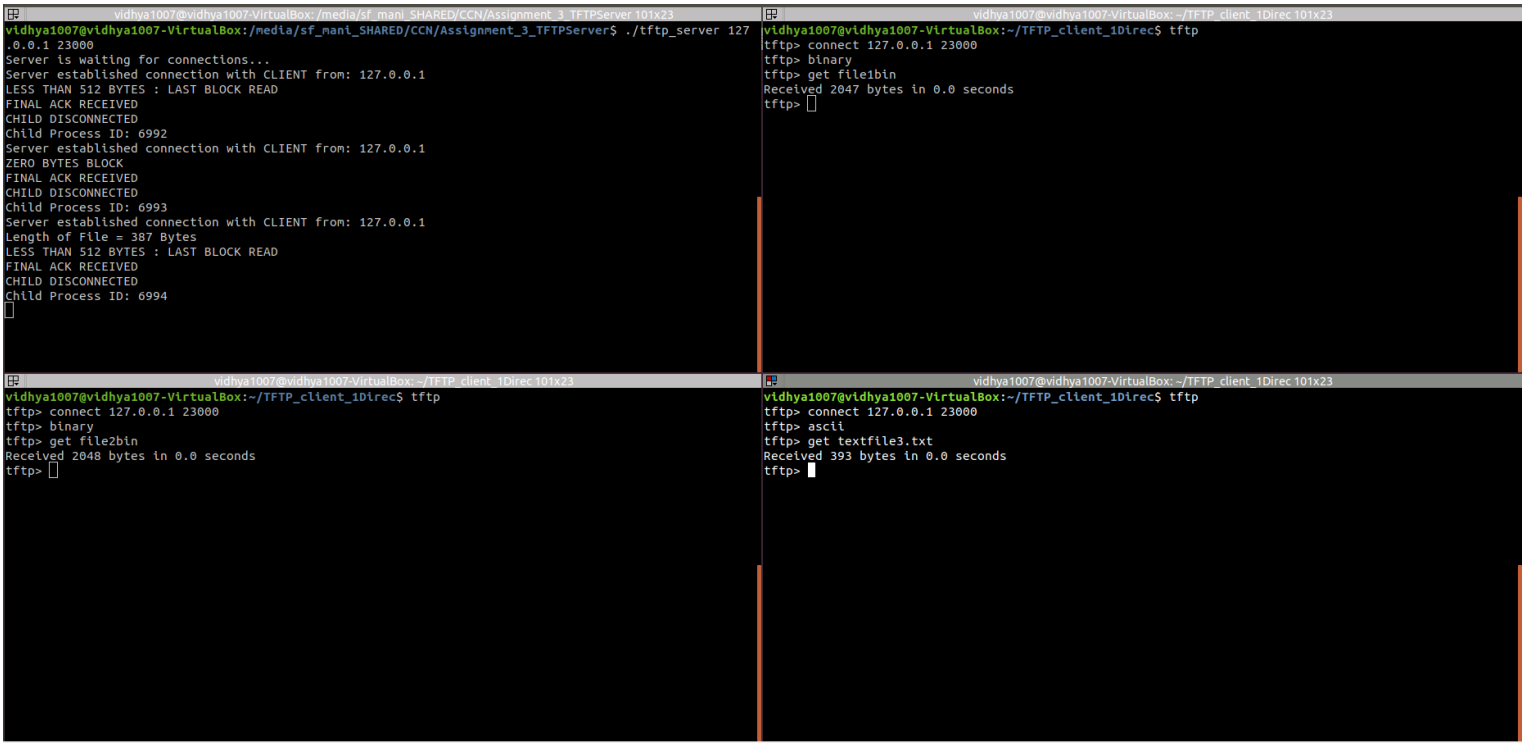
A random 34 MB was generated and was requested by client. Again the files were compared using diff. Block number wrap around worked and the file was successfully received.

5) TESTCASE 5 : INVALID FILE NAME REQUESTED



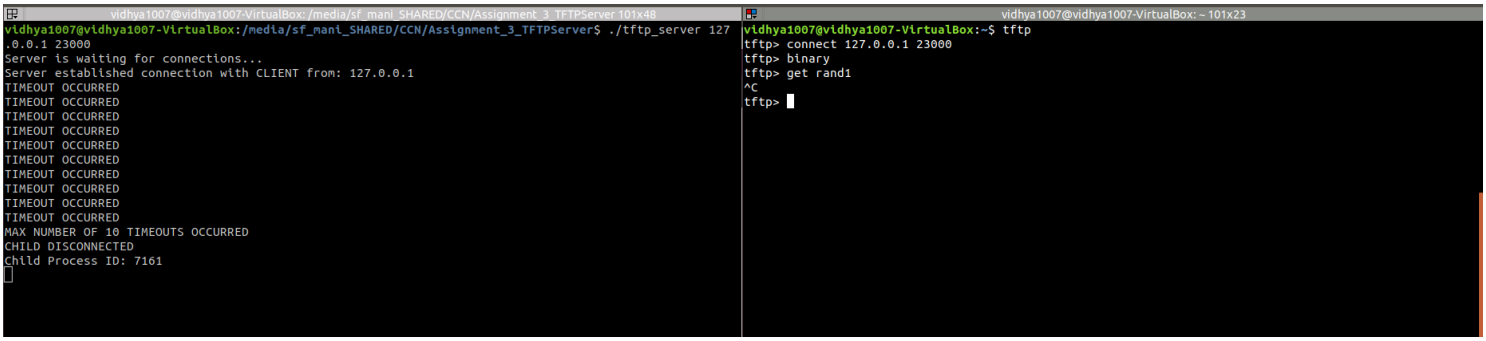
When a file which is not available in the server directory is requested, an error code of 1 saying “FILE NOT FOUND” was returned.

6) TESTCASE 6: MULTIPLE CLIENTS REQUESTING FILES



In this 3 clients were opened and each requested a file. Client 1 requested a file file1bin, client 2 requested a file file2bin, client 3 requested a file textfile3.txt. All the three client requests were processed and the server successfully transferred the corresponding files from server directory to the corresponding clients and all the files requested were successfully obtained in the client directory.

7) TESTCASE 7: TFTP SERVER TIMEOUT DURING CLIENT DISCONNECTION



A very large file (34MB) was requested from the client. And in between the request was terminated. Time out occurred at the server side and after 10 timeouts, the server recognized that the request was terminated at the child side.