Indian Institute of Engineering Science and Technology, Shibpur
Department of Computer Science and Technology
Computer Network Lab (CS 3272)

Assignment 6: File Transfer Application Development over UDP Socket

Time: 2 weeks

Objective

This assignment aims to develop a file transfer application over a UDP socket in a client-server mode. UDP, by nature, is an unreliable protocol. Hence, the file transfer application is supposed to ensure reliability by retransmitting packets and insequencing out-of-order packets. It can be achieved using Stop-n-Wait, Go-Back-N, and Selective-Repeat.

Technique

1. The standard TFTP (Trivial File Transfer Protocol) uses a Stop-n-Wait approach. You can develop only a TFTP client to work with the standard TFTP server. Please study RFCs for the TFTP protocol and implement the client version.

2. However, you can develop a file transfer application (server and client) using either Stop-n-Wait or Go-Back-N. Here, it is up to you to decide how to implement it, such as packet format, sequence space, timeout values, etc.

Testing

The proposed application should be tested by transferring various files, such as text, words, media files, etc. The size of the files also may vary; however, start with the small-size files.