

## **Lab Tutorial #4**

**Computer Networks - II**

**Date: 15/02/2018**

1. Implement an application layer reliable file transfer protocol using Sliding Window Protocol in C/C++. Use underlying UDP protocol for sending the application layer messages. (10 Points)
  - a. Create appropriate headers for your protocol such as sequence number, checksum, ACK, file size, window size etc. You can decide based the header based on your protocol design.
  - b. Split the file into fixed size segments (except the last one) and append the header before sending.
  - c. To handle the case of a packet loss or time out implement the go-back-n mechanism.
2. Test your protocol by transferring a large file using the developed file transfer protocol. (5 Points)
  - a. Change the window size and plot the time taken for the file transfer.
  - b. Introduce the loss on the channel and study the effect of loss rate on the time taken to transfer the file.