

# Data Communication and Computer Network Laboratory

## Master of Computer Application

Second Year, First Semester

Session: 2023-24

### Assignment - III

Date: 03/08/2023

The objective of this laboratory exercise is to look at the details of the User Datagram Protocol (UDP). UDP is a transport layer protocol. It is used by many application protocols like DNS, DHCP, SNMP etc., where reliability is not a concern.

To do this exercise you need to install the Wireshark tool, which is widely used to capture and examine a packet trace. Wireshark can be downloaded from [www.wireshark.org](http://www.wireshark.org).

#### Step1: Capture a Trace

- (i) Launch Wireshark
- (ii) From Capture→Options select Loopback interface
- (iii) Start a capture with a filter of “`ip.addr==127.0.0.1 and udp.port==xxxx`”, where `xxxx` is the port number used by the UDP server.
- (iv) Run the UDP server program on a terminal.
- (v) Run multiple instances of the UDP client program on separate terminals and send requests to the sever.
- (vi) Stop Wireshark capture

#### Step2: Inspect the Trace

Select different packets in the trace and browse the expanded UDP header and record the following fields:

- Source Port: the port from which the udp segment is sent.
- Destination Port: the port to which the udp segment is sent.
- Length: the length of the UDP segment.