

## **List of Experiments for Computer Networks Lab**

1. Write a client/server program in C using TCP socket to do the following:
  - a) The client will send a string to the server
  - b) The server will send the string back to the client
2. Write a client/server program in C using UDP socket to do the following:
  - a) The client will send a number to the server
  - b) The server will send the number back to the client
3. Write a client/server program in C using TCP socket to do the following:
  - a) The client will send a number to the server
  - b) The server will send the summation of the digits of the given number back to the client
4. Write a client/server program in C using UDP socket to do the following:
  - a) The client will send a string to the server
  - b) The server will check whether the given string is palindrome or not and reply back accordingly.
5. Write a client/server program in C using TCP socket to do the following:
  - a) The client will send a connection request to the server
  - b) The server will welcome the client with a random quote
6. Write a client/server program in C using TCP socket to do the following:
  - a) The client1 will send a string to the server
  - b) The server will send the vowels to client1 and the consonants to the client2
7. Write a client/server program in C using UDP socket to do the following:
  - a) The client1 will send a number to the server
  - b) The client2 will send a string to the server
  - c) The server will merge the number and the string and send the merged string back to both the clients

8. Write a client/server program in C using TCP socket to do the following:
  - a) The client will request to copy a file to another.
  - b) The server will create the destination file if not available and copy the content of the given file to it.
  
9. Write a client/server program in C using TCP socket to do the following:
  - a) The client will send a number to the server
  - b) The server1 will check whether the number is odd or even. If odd, it will send the number to the server2 to check it for prime; otherwise send even message to the client
  - c) The server2 will check the number for prime and if found to be prime, it sends "Prime" message to the client straightway
  
10. Write a client/server program in C using UDP socket to do the following:
  - a) The client will send a number to the server
  - b) The server will send back the reverse of the given number to the client.
  
11. Write a client/server program in C using UDP socket to demonstrate bit-stuffing technique with the following functions:
  - a) The client will send a frame (a sequence of bits) after performing the bit stuffing
  - b) The server will carry out the de-stuffing operation and display the original frame
  
12. Write a client/server program in C using TCP socket to demonstrate byte-stuffing technique with the following functions:
  - a) The client will send a frame (a sequence of characters) after performing the byte stuffing
  - b) The server will carry out the de-stuffing operation and display the original frame
  
13. Write a client/server program in C using TCP socket to do the following:
  - a) The client will send a number to the server
  - b) The server will check whether the given number is palindrome or not and reply accordingly
  - c) The server will serve each client creating a new thread