National University of Computer and Emerging Sciences



**Laboratory Manuals**

*for*

**Computer Networks - Lab**

(CL -3001)

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| Section | BCS-5B |
| Semester | Fall 2023 |

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**Lab Manual 07**

# Objective: TCP Multi-threading using pthreads.

# In lab Statement: (20)

**ONLINE VOTING SYSTEM**

You are to devise an online vote casting system using **TCP** multithreaded server-client program. The voters will log on from client systems and cast their votes. Note that

One client can cast a vote ONCE AND ONLY ONCE.

A list of registered voters is available in a text file in the following format:

**Name/CNIC number**

System should be secure and should only allow clients with authentic name and CNIC to cast the vote.

The Server shall

* First of all take the client’s name and CNIC and match it with the content of the text file (Voters\_List.txt).
* If the details match, then it will welcome the voter and **display the names and poll symbols of the candidates on the terminal**.(Candidates\_List.txt)
* The voter will then cast the vote by **MENTIONING THE POLL SYMBOL (not the name) OF THE CANDIDATE. All these details are to be recorded in an output text file.**
* This system should work perfectly for **at least 5 different clients.**

**Note:**

1. You should be familiar with basic file streaming commands in C.
2. The server-client code **should be in C** and only C language. No other language is accepted
3. Student shall be awarded zero in the lab and -50 absolutes, if plagiarism of any kind is found in this lab.