

# Computer Networks Assignment 1

Socket Programming

Deadline: February 24, 2019

## Problem Statement:

### A basic server and client using sockets

The server and client will be two different codes which will be run in different directories. They will both can communicate by establishing socket connections. The client will ask for information like - "list of files in server's directory". The server will return the name of all the files in its directory. Then client will ask for a specific file.

The client will create a connection to the server and send requests to download files to the client directory. It will write the files into its own directory. For example, let the server directory contain: file1.txt, file2.txt, file3.txt

### Client

```
>> listall           // client asked for the list of files in server's directory
file1.txt            // response [list of files] sent by server
file2.txt
file3.txt
>> send file2.txt    // client downloaded file2.txt in its own directory
>> send file3.txt    // client downloaded file2.txt in its own directory
```

Error handling such as requesting missing files must be handled.

Multiple clients are possible.

### Clarifications

- You are not allowed to use any external libraries. Just work with sockets.
- Error scenarios must be handled. Programs crashing during evaluation will be penalized.
- Using external libraries is not allowed. Sockets must be used.
- Plagiarism in any form shall not be tolerated.

### Marking Scheme

- Socket programming: 35 points
- HTTP connections: 35 points
- README, readability of code (comments): 10 points
- Viva: 20 points

**Allowed languages:** C, C++