

# CECS 327

## Assignment 1: FTP Client

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### 1 Objective

The objective of this assignment is to learn the use TCP communication through an implementation of an FTP client protocol in C++. The project is in groups of two or three students. You have to download the source file "FTPClient.cpp" from beachboard and implement the changes on top of this. Projects not using the "FTPClient.cpp" won't receive any point and will be checked for plagiarism.

### 2 Implementation

The client should work in passive mode and be able to list the remote directory and copy a file from the remote file system into the local file systems. The client should allow the user to perform the commands iteratively.

You have to download the source file provided and implement an FTP client that supports the following commands:

- PASV
- LIST
- QUIT
- RETR filename

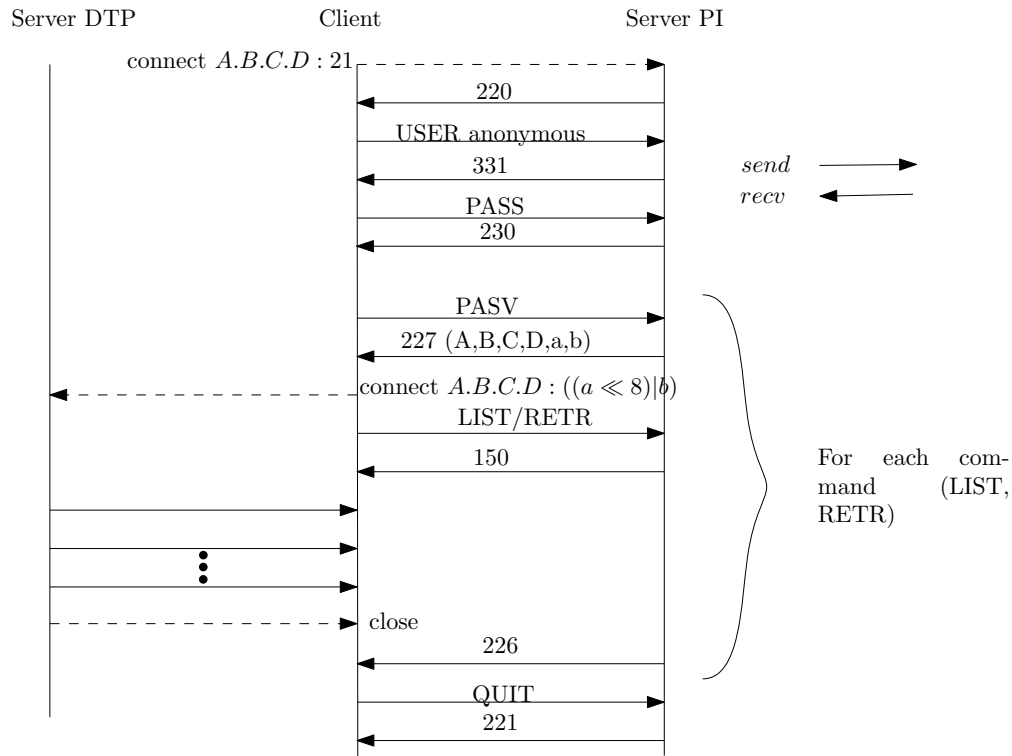


Figure 1: FTP Protocol for listing the files in the remote server

The details of the protocol can be found in RFC 959 - File Transfer Protocol <http://www.w3.org/Protocols/rfc959/>.

Windows users follow the tutorial for the client code at [https://msdn.microsoft.com/en-us/library/windows/desktop/ms737629\(v=vs.85\).aspx](https://msdn.microsoft.com/en-us/library/windows/desktop/ms737629(v=vs.85).aspx)

### 3 Testing

You can use the ftp server at ftp.cc.umanitoba.ca (130.179.16.134):

user: anonymous

pass: your email

## 4 Grading

| Criteria  | Weight |
|---|--------|
| Documentation of your program                             | 15%    |
| Source code (good modularization, coding style, comments) | 15%    |
| Execution output  | 60%    |
| List files  | 30 %   |
| Read file   | 30 %   |
| Originality   | 10 %   |

The documentation must be generated using Doxygen<sup>1</sup>. A good documentation requires to include comments with the format that Doxygen understand. Other tools are also fine.

## 5 Deliverables

Compress in a zip file and upload to beachboard. The zipfile must contain:

- 1.-Source code (c, c++, headers)
- 2.-HTML with the documentation. It has to contain the definitions of the methods with a short description, parameters and output of the method.

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<sup>1</sup><http://www.stack.nl/~dimitri/doxygen/>