CECS 327
Assignment 1: FTP Client

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Due date Sep 9th

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

The details of the protocol can be found in RFC 959 - File Transfer Protocol `http://www.w3.org/Protocols/rfc959/`.
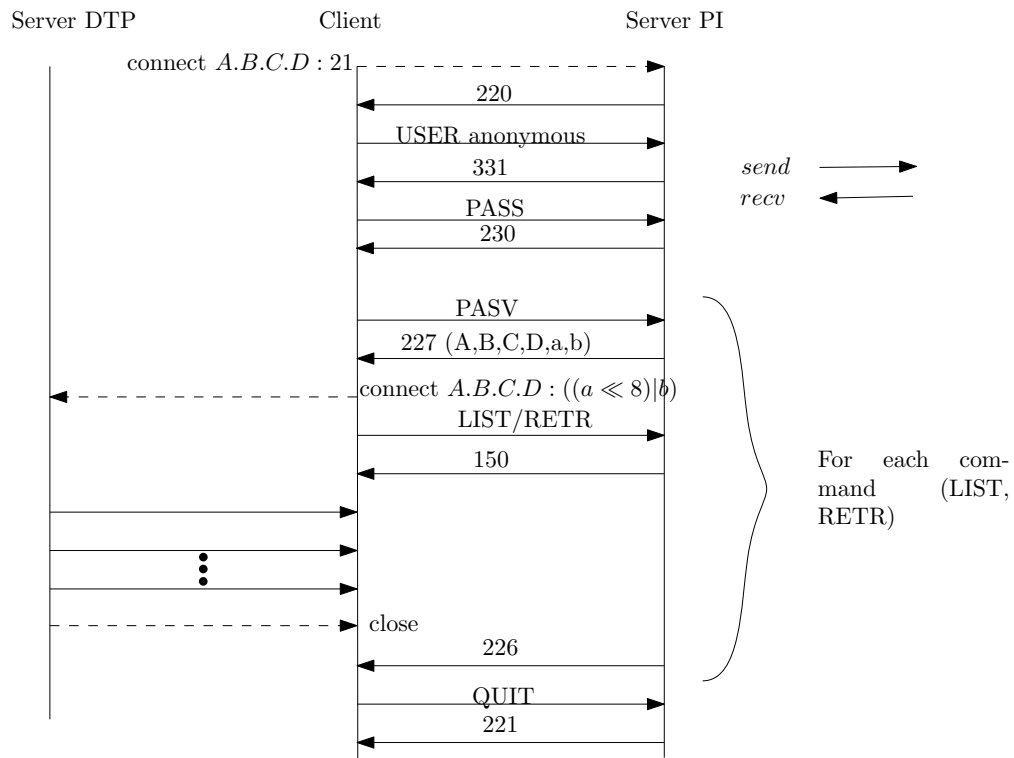
Server DTP   Client   Server PI

connect $A.B.C.D : 21$

220

USER anonymous

331   *send*

PASS   *recv*

230

PASV

227 (A,B,C,D,a,b)

connect $A.B.C.D : ((a \ll 8)|b)$

LIST/RETR

150

For each command (LIST, RETR)

close

226

QUIT

221

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

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[1]. 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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[1]http://www.stack.nl/~dimitri/doxygen/