Exercise 1b – How the Web Works

Objective

In this practical session, you will:

1. Install your hello.htm HTML page onto a server using FTP.
2. See the underlying principles of the HTTP protocol by retrieving your hello.htm page from a server using Telnet.

In the previous session, a browser was used to read a HTML file directly from the file system. To be precise, a URL beginning with file: was used; this only worked because the file was on your own hard disk – you could not have read a page from your neighbour's server like this.

This session demonstrates how web pages are read from a website using the hypertext transfer protocol (HTTP). This is the more general case for a website, and allows remote access to web pages.

Overview

Install an HTML page onto your server using FTP

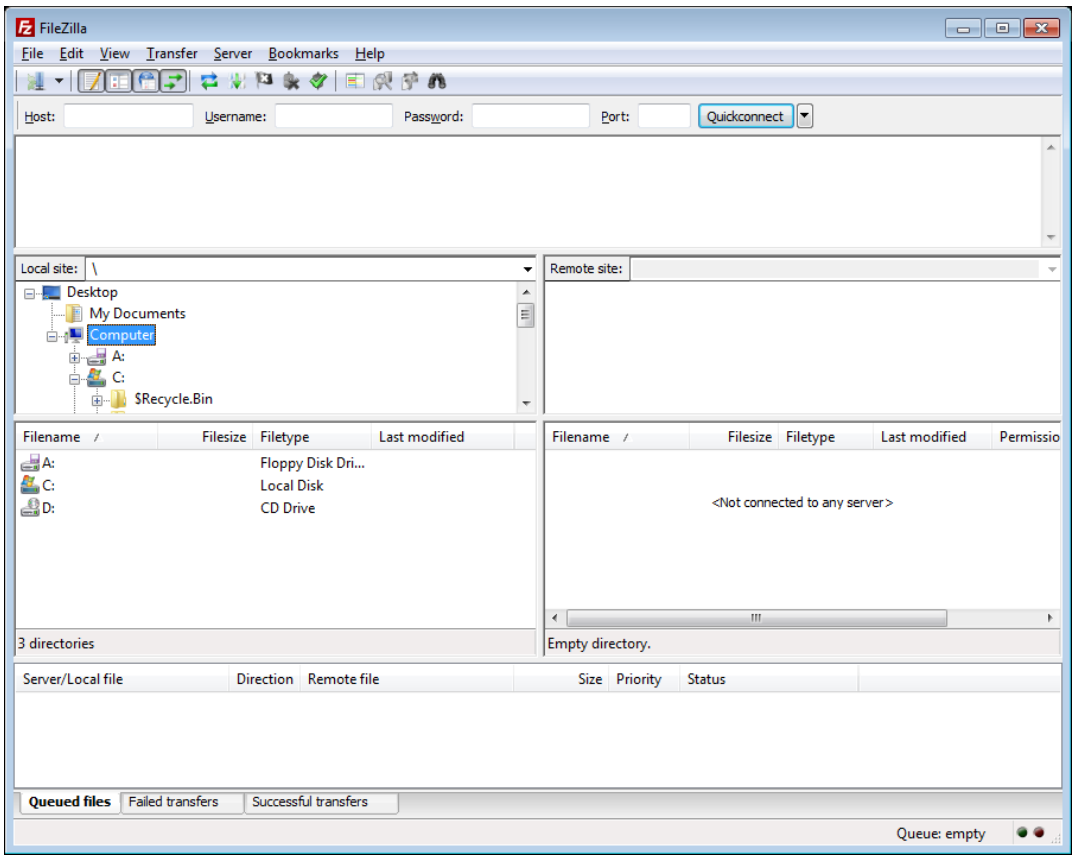
In the classroom, you are using the same machine as both your web server and as your authoring workstation, and thus, it is possible for you to place files "on the server" simply by copying them into the web root directory (\INETPUB\WWWROOT). However, normally the web server and the authoring workstation will be two different systems. If the web server is a Unix system or is hosted by an Internet Service Provider, you probably won't be able to simply copy files using Explorer; instead you will have to put them onto the server using FTP.

In this section, you will practice installing a page onto your web server using the FTP protocol. Your server has been configured to accept FTP upload requests from your account.

Instructions

1. Open FileZilla and accept the default settings and click OK to the 'Welcome to FileZilla' dialog box when the program starts.
2. Click Cancel if the 'Check for Updates' dialog appears.

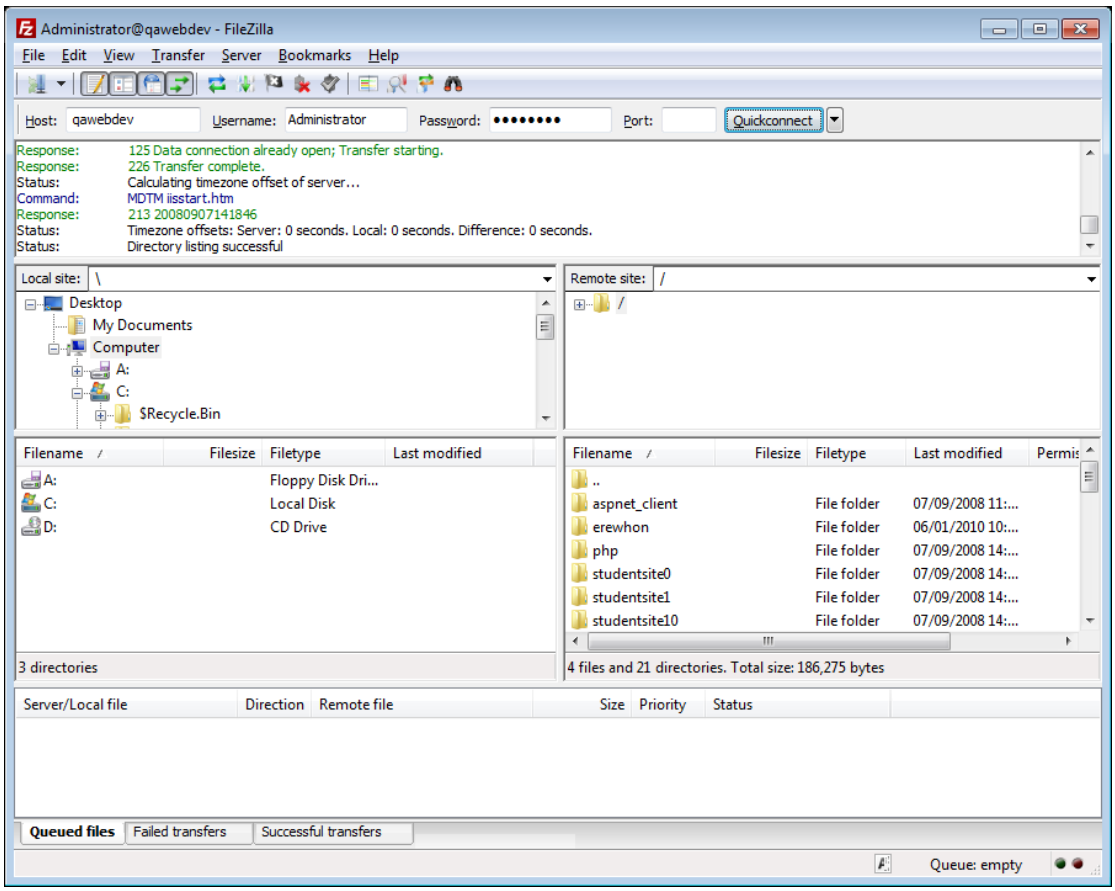
You should now have the following application on the desktop.



3. Type the following information in to the **Quickconnect** bar at the top of the window:

Host	**QAWEBFUN**
Username	**ADMINISTRATOR**
Password	**PASSWORD**
Port	**21**

4. Click on the **Quickconnect** button to create the ftp connection to our server. Your screen should look as follows:

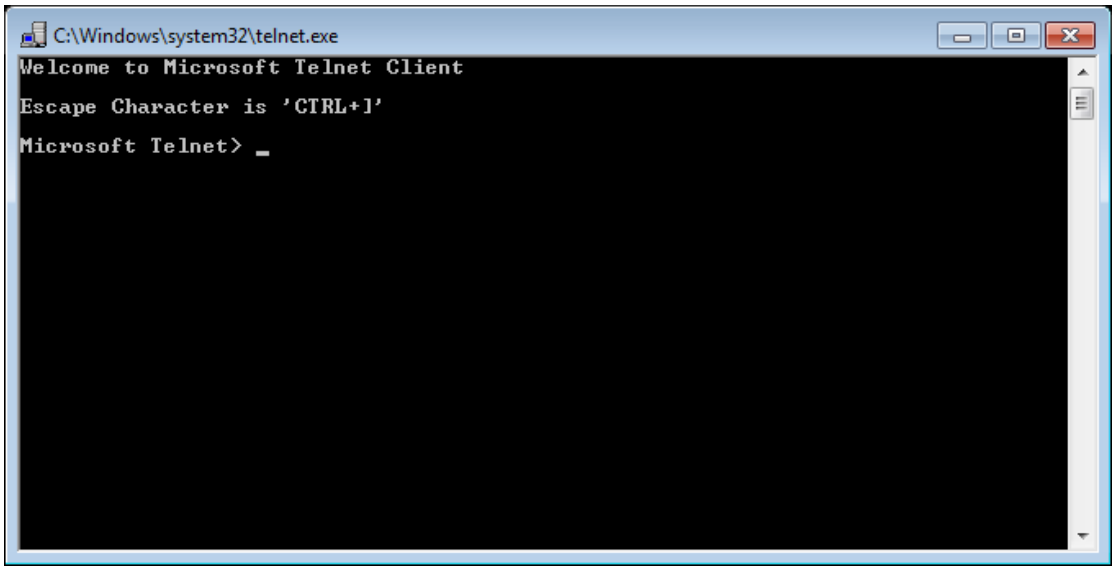


5. The left hand side represents your local machine, whilst the right hand side represents the files on the FTP server. Navigate to your starter folder, where you created the index.html file in the previous section.
6. Right click index.html and choose the **Upload** option from the context menu.
7. This will upload the file to the server.
8. After you've transferred the file, close FileZilla.

See the underlying principles of the HTTP protocol

In this section, you will pretend to be a web browser, by connecting to the web server (using telnet) and sending an HTTP command. The web server will believe that you are indeed a browser.

1. Run the telnet programme.



Use telnet to connect to your web server, as follows:

2. Type in the following command and press return.

```
open qawebfun 80
```

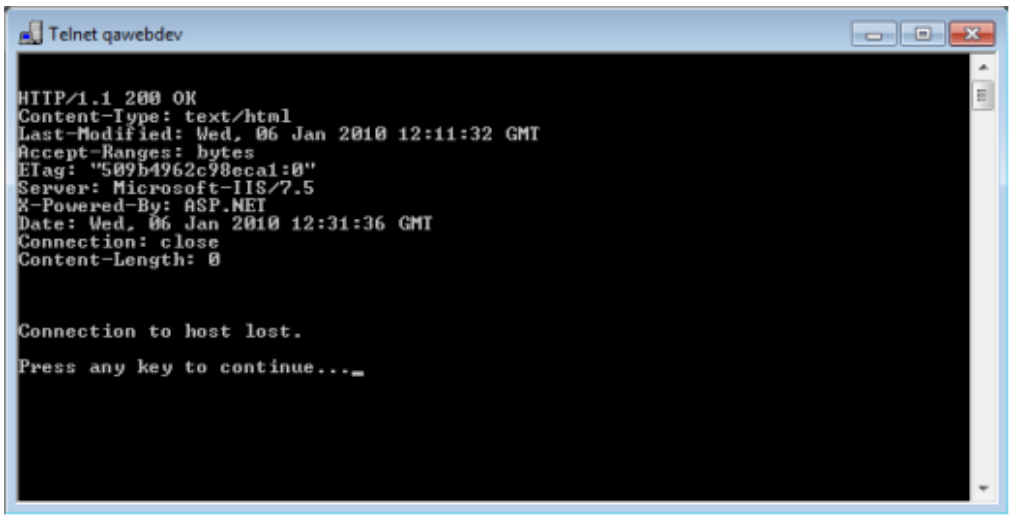
You will now type in an HTTP command to retrieve your page in "raw" format.

3. Type in exactly the command shown below.

```
GET /index.html HTTP/1.0
```

Type carefully, because the web server does not expect the browser to make typos and will not recognise any backspace characters! Note also that this command is case-sensitive. If you make a mistake, you will need to start again at the first step.

4. Please note that Telnet does not clear the screen of the previous characters, so your new entry will be overwriting the top line of text.
5. Press the Enter key twice at the end of the first line; the web server should then send back a response, after which a message will be displayed which says "Connection to host lost".



6. Do not press a key. If you cannot see the top of the response, then use the scroll bar on the right hand side of the Telnet window and scroll up to see the HTTP response and the MIME header.
7. Identify the various components of the HTTP response: the MIME header and the body of the page.

What Content-type did the server say the file was?