Project #2g – WebSocket Communication   due last day of class

Purpose:
This project uses the WebSocket protocol to establish bilateral communication between a browser and web server that support the protocol[1]. The purpose of this project is to design an application that explores the use of WebSockets to build dynamic two-way processing over TCP/IP.

Requirements:
Your WebSocket project:

1. **shall** use standard C++ and the standard library and C# and the .Net Framework on Windows.

2. **shall** provide an application, using WebSockets, that implements the functionality of Project #1, e.g., searching for text within file sets that exist on remote machines.

3. **shall** use a web application to asynchronously specifiy the path, file pattern, and text for searching on the server.

4. **Shall** use the WebSocket protocol to return results to the client.

5. **shall** provide search results using the bilateral communication supported by WebSockets, e.g., the server sends a message with the results without requiring the browser to use polling requests.

You may implement application in Windows 8 or on Linux or cross-platform using both. It appears that WebSockets server side is not provided by Windows 7, and only on IE10 and IE11 browsers.

You will find these references very useful in understanding how the WebSocket protocol works:
   http://msdn.microsoft.com/en-us/magazine/jj863133.aspx
   http://warmcat.com/_wp/2010/11/01/libwebsockets-html5-websocket-server-library-in-c/
   http://www.linuxforu.com/2012/04/getting-started-with-html5-websockets/

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[1] Chrome and IE10, available on Windows 8 support the browser side of WebSockets. The windows platform SDK and .Net Framework 4 provide support for server side processing with Websockets, but only on Windows 8. There are a couple of libraries available on Linux. You may, of course, implement you own WebSockets server to be used with Chrome on Windows 7.