Introduction to Visual SourceSafe

Visual SourceSafe (VSS) is Microsoft's Version Control product. Although it is typically used in an integrated mode with Visual Studio, it can also be used with any file or development environment. If you have used CVS, then you are already familiar with VSS – it is essentially a Windows version of the same thing.

VSS is a client/server system. The server stores a database of all project files together with the history of changes for these files. This storage is done in an efficient way – only the differences in changes for each file are stored instead of entire copies. This storage scheme allows you to "roll back" to a previous version of a file or folder if you wish.

The client interacts with the server to allow the user to specify what files to check out and to make a mapping between the directory structures stored on the server to the directory structure on the local drive. The interaction is made through the networked file system.

In addition, VSS allows you to manage multiple developers on the same project. This is done by "checking out" a file from the server. The process of checking out a file copies the version stored on the server to the local drive. While a file is checked out, other developers are generally not allowed to access the file. The developer that checked out the file will make revisions and when done will check the file back into the system. At this point other developers can check the file out and work with it.

For this semester, I have created a VSS server on my desktop machine, ouroboros.uaa.alaska.edu. The screenshots below indicate how to connect to it. These screenshots assume that you are working on a CS lab machine that has VSS installed. If you would like to get a copy of VSS to install locally at a different location then let me know and I can check the software out for you.
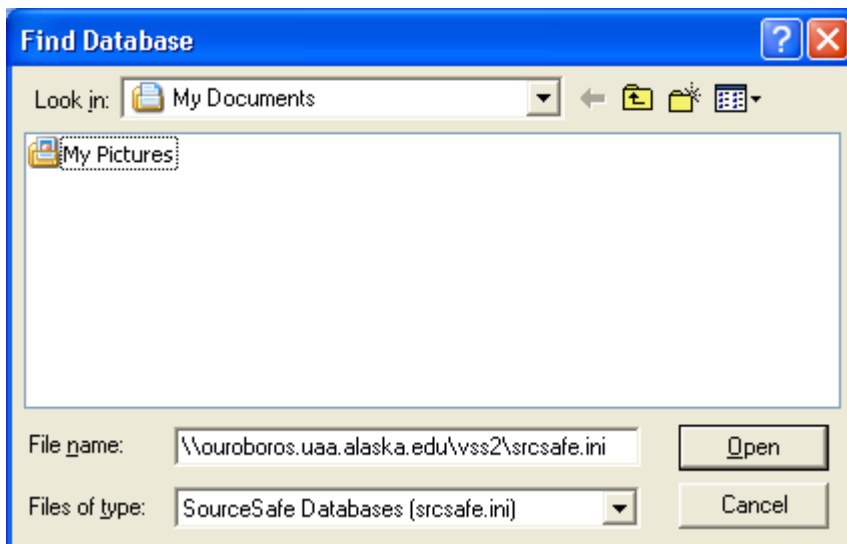
Select Visual SourceSafe from the start menu; you will be greeted with a screen like the following:
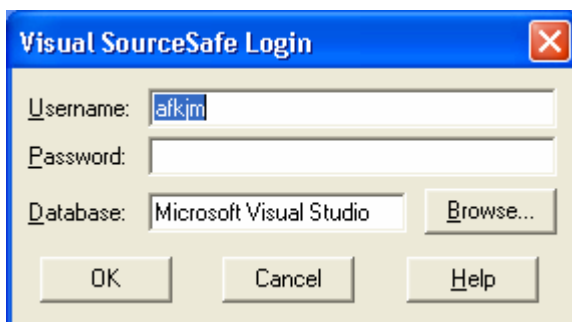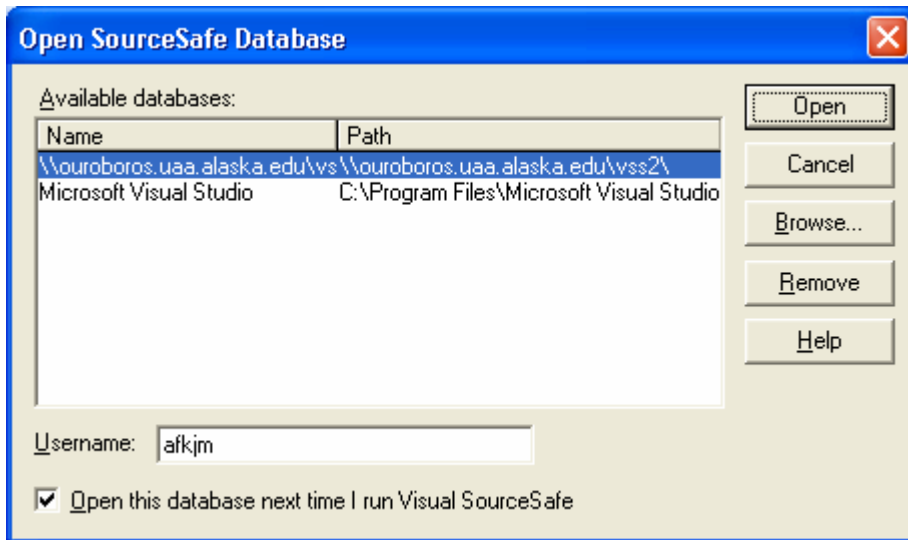

Click the "Browse" button to find the database for the class:
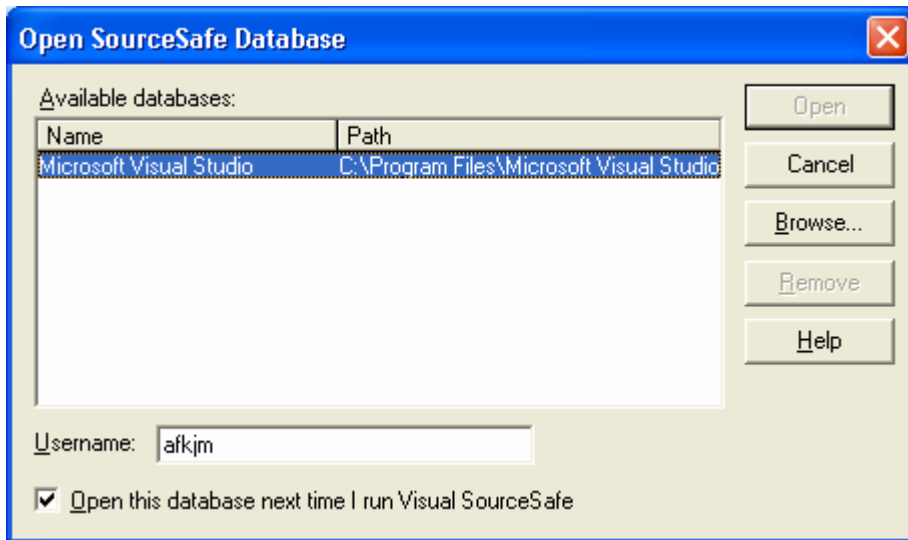
Click on "Browse" and enter the path to Ouroboros below,
\\ouroboros.uaa.alaska.edu\vss2\srcsafe.ini
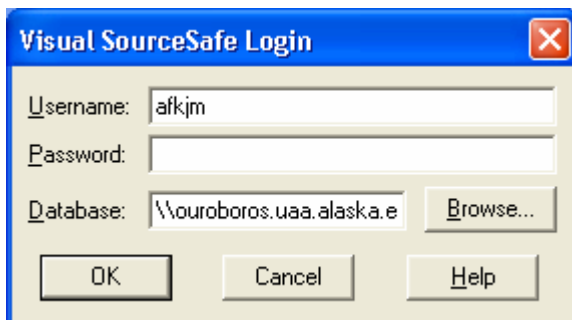

Click OK to get back to the Open database window:

Click on "open"

Back at the main window it should now have the new path:


Enter your username and password and login.

Your username will be set to your unix login. Your password will be set to your first name, in all lowercase. This is not a particularly secure setup, so you shouldn't be storing anything sensitive on the database. Also all other students with accounts will be able to see the files that you place on the server.

If your password and login are authenticated you will see the main Visual SourceSafe screen:
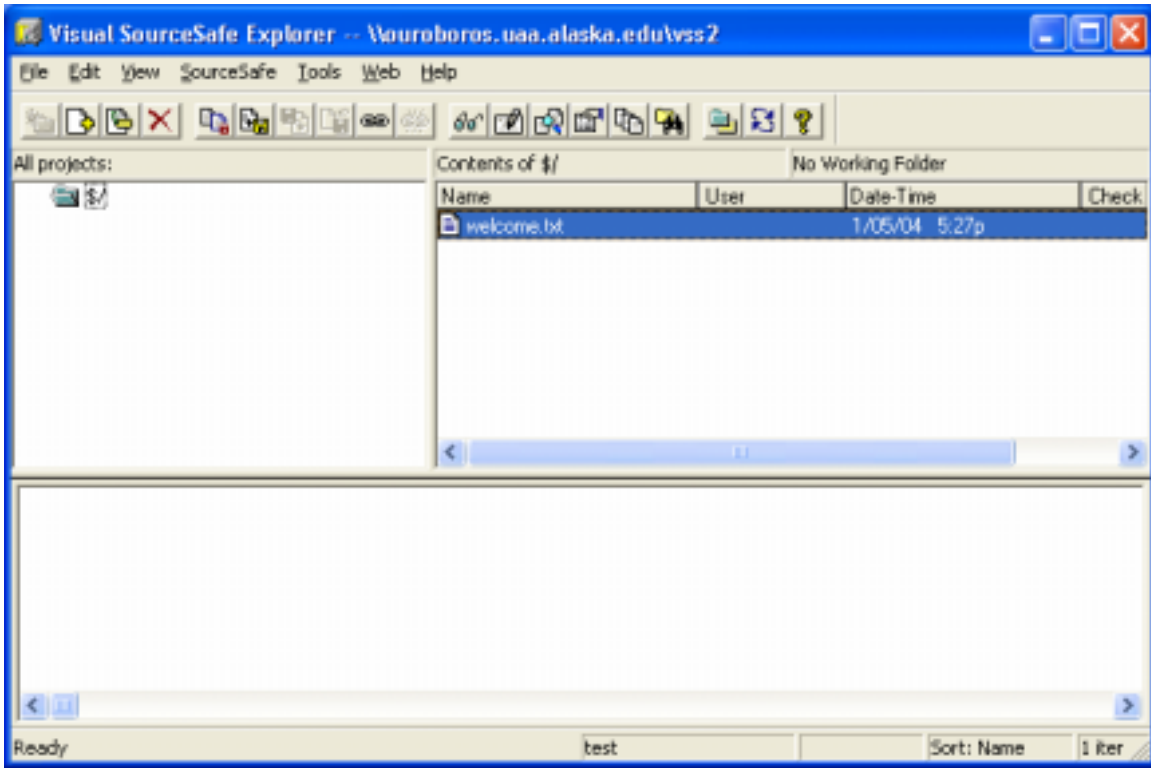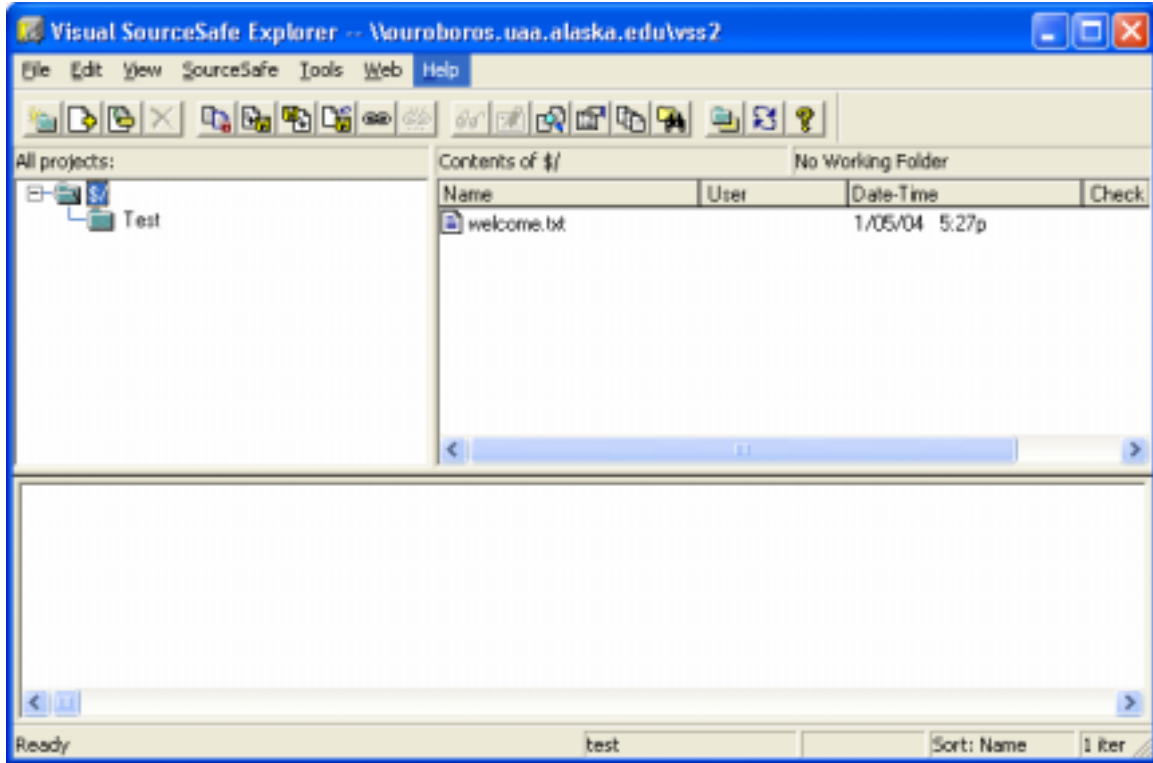
You can navigate through files on the VSS server and double-click them to view the files. I have added a "welcome.txt" file for you to look at.
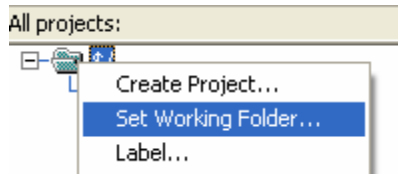
To create a new project folder, right-click on the root folder, denoted by the $, and pick "Create Project":
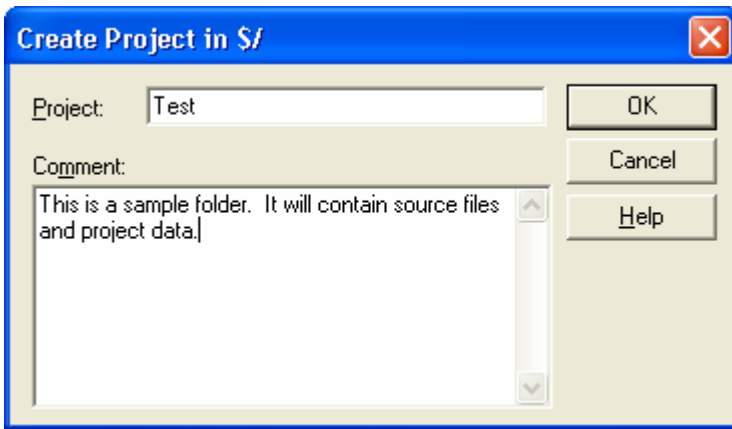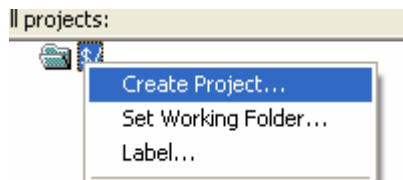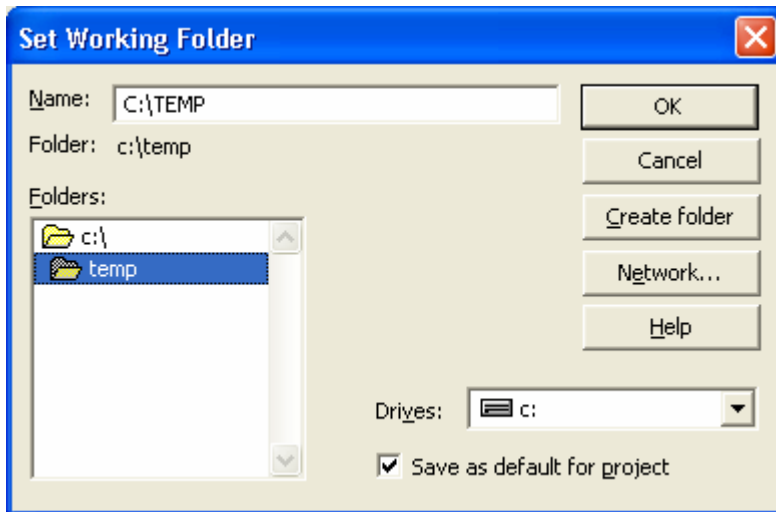
Here I added a "Test" folder to the source tree:

To upload a file to the source tree, you must first map the root of the visual sourcesafe server to a drive on your local drive. Do this by right-clicking the root and selecting "Set working directory".

In this case I set the working directory to a "temp" directory on the local C: drive. This means that the "temp" directory will be mapped to the root of VSS; i.e. there will be a "Test" directory as a sub-folder within the "temp" directory.
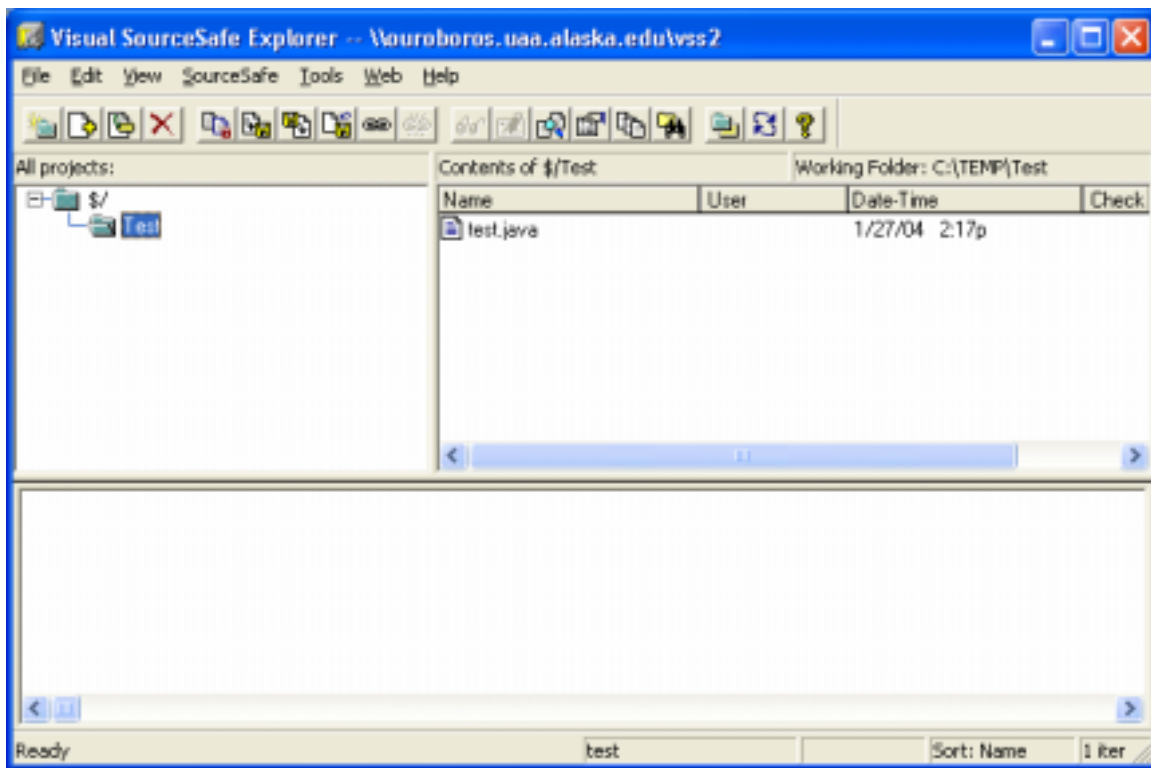
Let's say that I've made a file called "test.java" in the temp directory that I would like to upload to the server. I can do this by selecting the "add files" button which has a plus symbol on it:
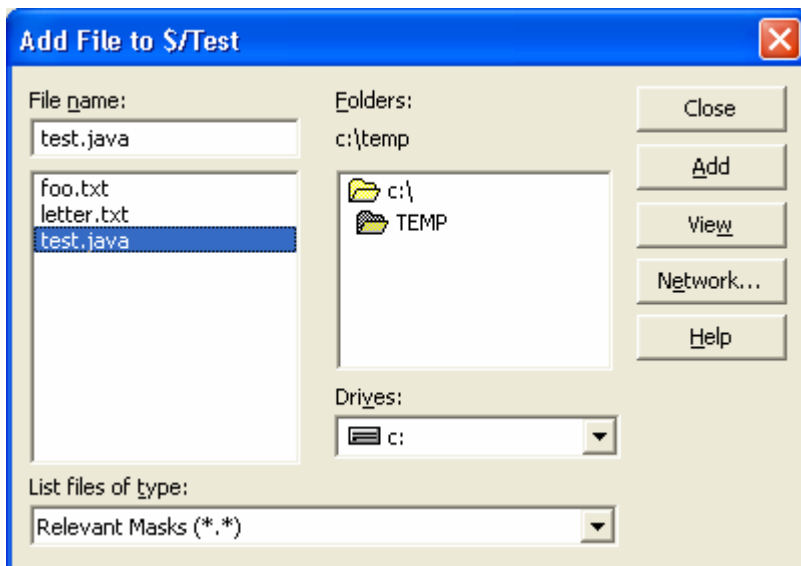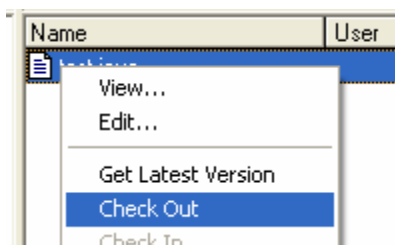

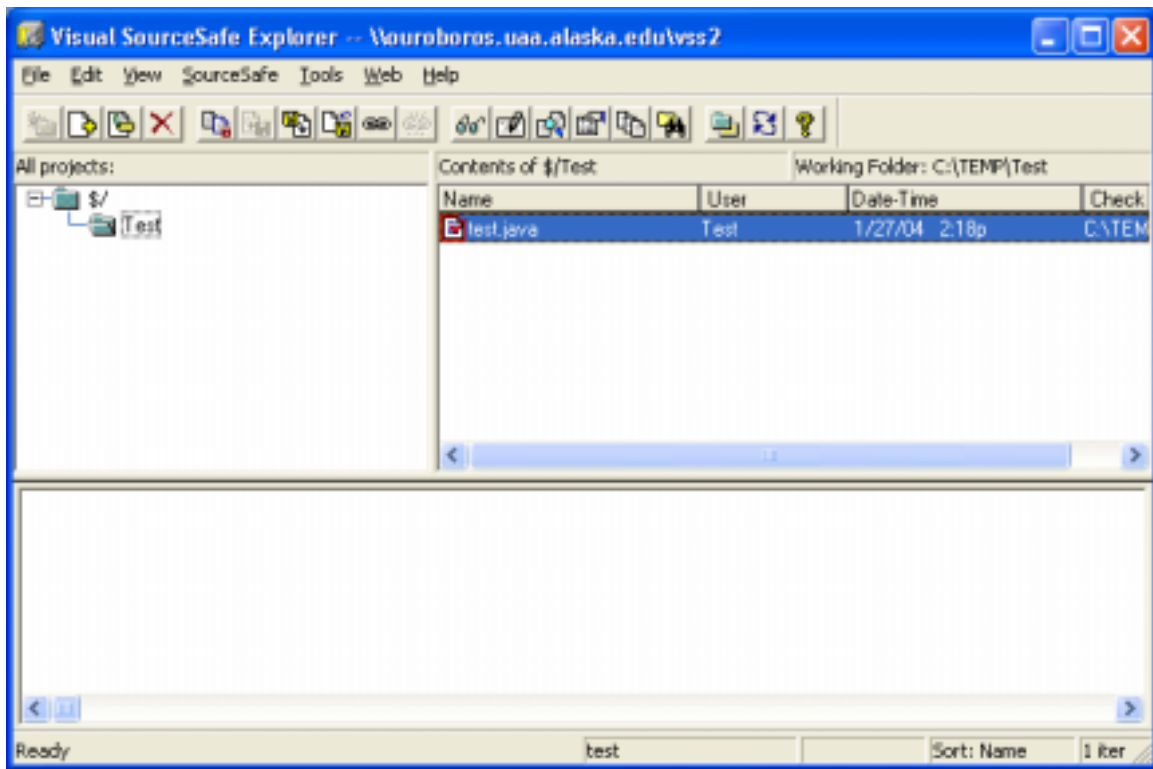Select the file and add a comment:
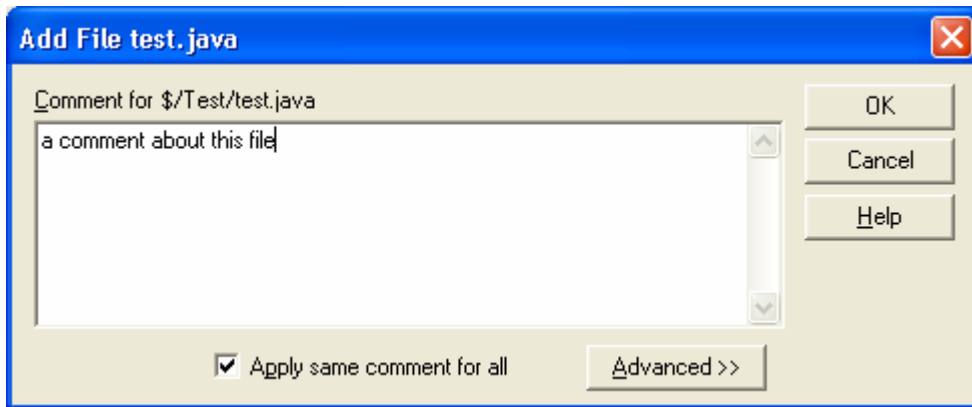
The file will now show up in the source tree:

To check out a file right-click the file or folder and select "check out"

The file will be in red indicated someone has checked it out:

When a file is checked out, in general nobody else can check it out. At this point you should be working on the file(s) you have checked out. When you are done editing the file check it back in by right-clicking the file in the source tree:

The check-in process will copy the file from your local drive to the server. It is a good idea to add comments about the modifications you have made. You can make comments about every change made to the files.

There is much more that VSS can do, but those are the basics. Feel free to explore the other options and looking at the integrated help file. You can also check out entire directories at a time and browse through file histories.

You should be using VSS or some other version control system to store all of the files for your project. This includes documentation such as requirements or design documents. Not only does VSS provide a good backup for you in case something happens to your local files, it is also a good way to share files with other members of your team.