

Introduction

The programming assignments for the course will be tested and scored by the New Automated Grader (NAG). This document describes how to submit your programs for grading, how the grading is performed, and how to interpret the results when trying to fix your mistakes.

The NAG is a client-server application written in the Java programming language. You will install the (free) client software, called *Submit*, on your computer and use that software to submit your programs. The installation process is described in the next section. When you submit a program, the client software will establish a network connection to the server software (usually called the Grader Server, or simply the Grader), and transfer your submission to the computer on which the Grader is running. After testing and scoring your program, the Grader Server will send you an e-mail message containing your score for that submission, and additional information. See the sections following the installation instructions for details and examples.

Installation

Using the client software, *Submit*, requires a computer running Windows 95/98 or Windows NT (it will not run on DOS or Windows 3.1) and a 32-bit connection to the Internet. In order to operate *Submit*, you must first obtain and install the Java Runtime Environment, a free software package from Sun Microsystems, Inc.

■ Downloading the Java Runtime Environment JRE from the Internet:

- 1) Using a web browser (such as Netscape or Microsoft Explorer), connect to the Java website at **www.javasoft.com**
- 2) Click on the link for Products & APIs in the left-hand column.
- 3) Scroll down click on the Java Runtime Environment - JRE 1.1.7B link.
- 4) Click on the JRE 1.1 Win32 Release link. Click on the Continue button. Click the Agree button on the Export Terms and Control page.
- 5) Click on the FTP download `jre117B-win32.exe` button to start the download process. In the Save dialog box, select a folder and click the Save button. This will copy the file `jre117B-win32.exe` to the location you just selected; this file is a self-extracting archive. Be sure to remember the location you chose.

The Java Runtime will also be mirrored from the Grader Home page, so you may also obtain it when you download the Grader Submit Client as described below. Note, the Submit Client will also work with versions 1.1.3-1.1.6 of the Java Runtime.

■ Installing the Java Runtime Environment JRE on your computer:

- 1) Installation in the Windows environment is straightforward. Using the Windows Explorer, find the folder where you saved the Java Runtime file, `jre117B-win32.exe`, and double-click on the file. This will launch an installation application.
- 2) Unless you want to customize the location the Java Runtime will be installed to, just click the Next button on each dialog box until the installation is complete. Note the location in which the Java runtime was installed; e.g., the default location would be `C:\jre1.1.7B`.
- 3) Now you must add the location of the Java runtime executable to your system path. The instructions given here assume this is the default location (shown above). If not, use the correct location when you edit the path.

For Win95/98:

- Use Windows Explorer to look in the root directory on your C drive.
- There should be a file named `autoexec.bat`
- Open that file in an editor (Notepad will do) and find the line that starts with "path=".
- Go to the end of that line and type a semicolon, followed by `C:\jre1.1.7B\bin`.

For WinNT:

- Go to the Start menu, to Settings, and start Control Panel.
- Open the System tool and click on the Environment tab.
- In the top window, scroll if necessary, and find the line starting with Path.
- Click on that line and the path string will be displayed in the text box line labeled "value" near the bottom.
- Edit that line to type a semicolon, followed by `C:\jre1.1.7B\bin`.
- Click on the Apply button and close the System tool and Control Panel.

▪ **Downloading *Submit* from the Internet:**

- 1) Using a web browser (such as Netscape or Microsoft Explorer), connect to the Automated Grader Home Page at <http://ei.cs.vt.edu/~cs1044/Grader/Grader.html>. Scroll down to the section for downloading the Client.
- 2) Select the appropriate version of *Submit* for your course and click on the link to download it.
- 3) When you are asked to choose a location to save the file, choose any location you like, but be sure to remember where you saved it. The self-extracting archive for *Submit* will be copied to your computer.

▪ **Installing *Submit* on your computer:**

- 1) Using the Windows Explorer, find the folder where you saved the *Submit* archive file, and double-click on the file. This will extract the contents of the archive file to your computer, creating a number of subfolders as well. Do not delete or alter any of these files. By default, *Submit* will be installed in a folder named `CSubmit` or `F90Submit` on the root of the current drive; you can change that during the extraction process if you like.
- 2) You can run *Submit* by double-clicking on the file `Submit.bat` in the `CSubmit` (or `F90Submit`) folder. To make it easier, you can create a shortcut on your desktop. Right-click (click and hold down the right mouse button) on the file `Submit.bat` and drag it to the desktop. When you release the mouse, a menu will pop up; select Create Shortcut(s) Here and you can then run *Submit* by double-clicking on the resulting shortcut icon.