



CompleteSchool User Interface

CompleteSchool uses the best modern web based technologies to provide a user interface to the data based functionality of CompleteSchool. All functions are web based (accessible directly through a web browser). Data is served to web applications using Microsoft Internet Information Services (IIS), Microsoft SQL Server, and Apache Tomcat. ASP.NET is used to serve teacher, parent, and student access. Java technology is used for administrative, clerical, and other uses. CompleteSchool data can also be accessed using palm-top computers, OMR Scanners, and other devices.

CompleteSchool separates the user interface from the data storage, business rules, data manipulation, heavy computations, and report generation capabilities of the system. Separating the user interface allows CompleteSchool to provide functionality on multiple user interfaces without duplicating programming effort. This allows CompleteSchool to use the best user interface for the job.

Both types of user interface used by CompleteSchool have their advantages and disadvantages. Generally, light duty applications that require little data entry work well with programs written using ASP.NET, while applications that require extensive data entry and continuous use are more suited to a full function Java web client.

All of these technologies are evolving. For example, ASP.NET is evolving to use more "Web 2.0" capabilities (from the server side), and Google Web Toolkit gives Java full cross platform "Web 2.0" client programming capabilities.

CompleteSchool will always use the best of these new capabilities.

Note that the Java client software also comes in an identical natively compiled non-web based version for Windows that is excellent for use with terminal servers.

JAVA

Pros:

Completely programmable, highly interactive user interface.

Complete access to the user's workstation for interacting with workstation data, devices (e.g. scanners, palm-top computers), and applications (e.g. Microsoft Excel or Word).

Cons:

Java may not be supported by some older computers. However, more than 97% of all computers have Java on them. For example, all Mac OS X computers come with Java, and updates to Java come directly from Apple with new OS releases.

ASP.NET

Pros:

Works well with older computers that don't support new "Web 2.0" capabilities.

Cons:

Limited User Interface (but improving all the time). Features like table column positioning/sizing/locking, drag-and-drop, trees, and a many other user interface options are mostly unavailable. These features either don't work on all browsers (especially older browsers), work differently on different browsers, or don't work on any browser.

Pages display (and print) differently with different web browsers.

Interactive Capabilities are limited (but improving all the time). Any data behind the scenes (e.g. combobox lists) are loaded along with the web page, so changes to the web page often mean that the entire page or frame must be reloaded.

Limited interactions with the user's workstation. Interactions with the user's workstation are mostly limited to uploading or downloading a file with the user giving permission each time. If the user puts some data in and closes the web browser window, the window closes, without warning, losing the user's input. These programs can't automatically locate and load student images or other data from a CD-ROM or other files. They can't access connected devices like Optical Mark Readers (Scanners) or palm-top computers. Interactions with other application programs (like Microsoft Excel or Word) are limited.