
AppPro for OpenEdge

A business application development
framework for PAS OpenEdge / WebSpeed

AppTechnologies
Business Application Development

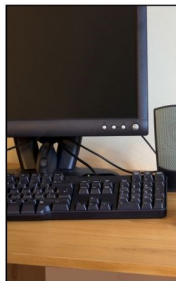
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AppPro for OpenEdge™, by App Technologies, Inc., leverages the power of Progress® OpenEdge® by providing a structured environment for robust web business application development.

App Technologies consulting services combined with the AppPro for OpenEdge framework will provide you with the needed resources, knowledge and direction that is critical for a successful web deployment. Once your initial project is completed, you will be equipped with the necessary tools for future application development projects.



The AppPro for OpenEdge framework provides the necessary (and often overlooked) standards, security, and environmental tools that are an integral part of a successful web business application deployment. With AppPro for OpenEdge, you will realize productivity benefits in both the application development and production run-time environments.

AppPro for OpenEdge features:

- Standard Program Development Wizards and Templates
- Integrated AJAX processing for interactive web applications
- Program Source Version Control
- On-line Cascading Style Sheet Management
- Login / Password Control
- Multi-language Translation Functionality
- Common Program Security Plug-in
- Dynamic Data-driven Menu System
- Common Function Utilities

Principal Industries International

Home Customer Maintenance Order Maintenance

Order ID: Customer: A Status: All Statuses (9)

Order ID	Order Date & Time	Order	Customer
4791810	10/19/2016 13:45:02	Parti	A Auctor Associates [3454]
4792434	02/02/2017 15:00:28	Parti	A Incorporated [3426]
4793058	05/15/2017 15:40:58	Parti	A Tortor Nunc Consulting [3538]
4793604	09/01/2017 17:28:29	Paid	A Ultricies Institute [3304]

Search: All Columns

New Delete

Order Lines (3) Shipments (1)

Line Nbr	Product ID	Unit Price	Order Qty	Ext. Price
1	Viper Audio Glass Break Sensor	\$39.99	19	\$759.81
2	Infallible 24H Matte 32 Amber	\$37.75	11	\$415.25
3	Einett Satin 200ml	\$47.13	6	\$282.78
Totals				\$1,457.84

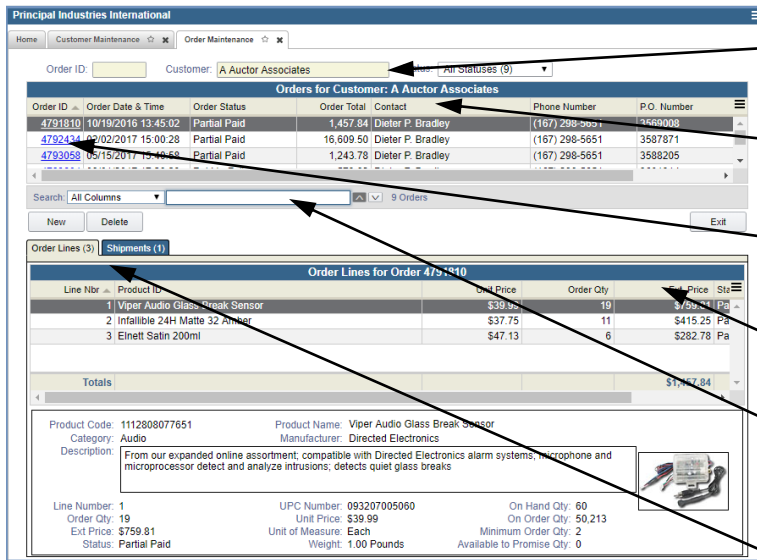
Product Code: 1112808077651 Product Name: Viper Audio Glass Break Sensor
 Category: Audio Manufacturer: Directed Electronics
 Description: From our expanded online assortment; compatible with Directed Electronics alarm systems; m
 microprocessor detect and analyze intrusions; detects quiet glass breaks

Line Number: 1 UPC Number: 093207005060
 Order Qty: 19 Unit Price: \$39.99
 Ext Price: \$759.81 Unit of Measure: Each
 Status: Partial Paid Weight: 1.00 Pounds Avail

Standard Program Development Templates

The Standard Program Templates provide a consistent user interface for presenting and maintaining data. The templates provide pre-defined developer interaction points where business logic can be easily inserted. Should your business require changes to the base functionality, the master templates are available for modification.

Container Template with Data Grid and Tabs



The data grid content can be refined by the use of "Data Filters".

The data grid can be sorted in any column order by clicking on the associated column header.

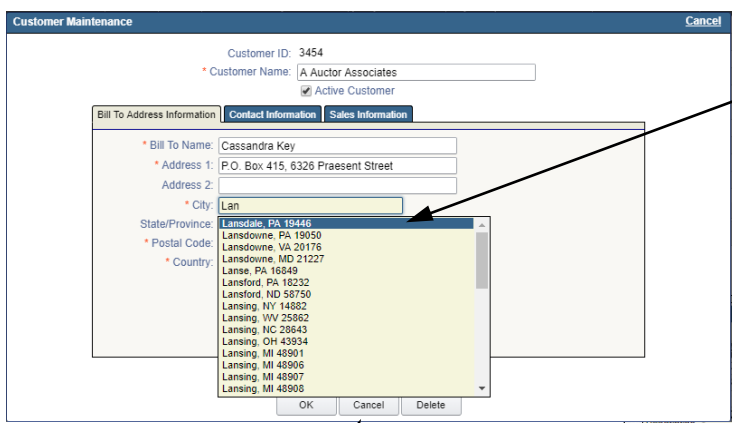
The data grid rows or individual columns can be conditioned based on business logic.

The data grid allows for resizing and moving of data columns by user preference..

A search can be performed on a single column (or all columns) matching an input search string.

The Tab Template is available to define additional fields or parent/child relationships associated to the highlighted row in the data grid.

Maintenance Template

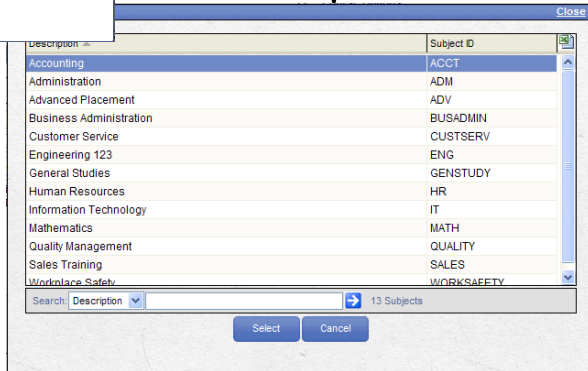


AJAX AutoComplete template allows for quick keystroke inquiry into field values.

Clicking a Lookup icon can initiate a Pop-Up Lookup. The selected value is returned to the appropriate field.

Buttons are easily defined by using the Button Template. The button images are generated dynamically through the use of Cascading Style Sheets eliminating the need for individual graphic files to be created for each button.

Pop-Up Template



Program Source Version Control

The Program Source Version Control supplies a structured development environment that provides visibility to all programs and other objects within the web environment. Developers are able to checkout, edit, and compile registered programs/objects. Previous program versions may be viewed or compared against another version for differences between the two versions. Previous versions are also available for possible production rollback. Once program changes are ready for production, the programs are assigned to Folders so multiple programs associated to the same project can be grouped together for implementation.

The screenshot shows the 'Object Maintenance' application. At the top, there's a navigation bar with 'Home' and 'Object Maintenance'. Below that, there are filters for 'Application: OPS - Order Processing System' and 'Object Type: Progress WebSpeed (.htm)'. A table lists various objects with columns for Object ID, Description, Ext, Template, Wizard, Ind, Prod Ver, Dev Ver, and Fix. The 'OPSM140X' object is highlighted. Below the table, a 'Details for OPSM140X.HTM - Category Maintenance AJAX' pane is open, showing version information (Prod: 2.1, Dev: 3.1) and 'In Use By' information. A search bar shows '150 Objects' and a toolbar contains buttons for New, Update, Checkout, Versions, Edit, Compile, Cancel Version, Assign To Folder, Run Program, Language Phrases, Cross References, Comparison Listing, Input Field Wizard, Code Examples, Schema Utility, Quick View, and Quick Compare.

The Object Information frame shows the details and history of the object being maintained.

Objects can be checked out, edited, compiled, compared with previous versions and added to production implementation folders. Miscellaneous functions such as foreign language translations, object cross referencing and compilation listings are available for each object.

The screenshot shows the 'Object Maintenance - Versions' application window. It displays the application name 'Order Processing System', object type 'Progress WebSpeed (.htm)', and object ID 'OPSM140X - Category Maintenance AJAX'. A table lists versions with columns for Version, Status, and Modification Reason. The '3.1' version is highlighted. A search bar shows 'All Columns' and buttons for View, Compare, RCS History, Apply RCS Lock, and Remove RCS Lock. A 'Close' button is in the top right corner.

This is a close-up of the version comparison table. The table has three columns: Version, Status, and Modification Reason. The rows are as follows:

Version	Status	Modification Reason
3.1	Development	test
2.1	Production	Add Export Filename
1.3	Archive	Add call to product info DIF
1.2	Archive	Adjust ProGrid width.
1.1	Archive	Initial Object Creation.

This is a close-up of the code comparison pane. It shows the application name, object type, object ID, and a comparison between versions 1.1 and 3.1. The code is displayed in a monospaced font with line numbers on the left. The code includes comments and function calls like 'SetProGridAttr', 'AddProGridColumn', and 'AddProGridRowData'. A 'Close Window' button is at the bottom right.

To compare two versions, select first

On-line Cascading Style Sheet (CSS) Management

Cascading Style Sheets define how web pages will be displayed by assigning a “Style Class” to various elements on a web page. By changing an attribute of a Style Class, all references to that Style Class immediately inherit the new characteristics. An on-line Cascading Style Sheet management system is provided, allowing for the automatic generation of CSS files. Style Classes are defined for nearly every aspect of the **AppPro for OpenEdge** environment. “Style Themes” are also available to create unique Web page themes. Internet browser specific characteristics are maintained at the “Style Platform” level to compensate for the idiosyncrasies between browsers and versions. CSS version control is maintained to allow reverting back to previous CSS versions, if necessary.

Multiple versions of the Cascading Style Sheets are maintained to allow reverting back to previous versions if necessary.

Principal Industries International

Home Style Version Maintenance ☆ ✕

Viewing with Version: 10, Theme: Standard

Style Version	Create Date	CSS Rev	Regeneration Required	Generation Date	Released to QA	Released To QA Date	Released to Prod
10	10/02/2015	0.0	Yes	09/07/2018	No		No
9	05/15/2012	0.0	Yes	09/16/2015	Yes	10/02/2015	Yes

Search: All Columns 10 Style Versions

Update Copy Version Differences Generate Style Sheets Select Version Exit

Style Classes (357) Style Themes (12) Style Platforms (9) Style Browsers (6)

Style Classes for Version 10

Class Description	Class Type
#InfoBoxBannerClose	CSS
#InfoBoxBannerDiv	CSS
#InfoBoxBannerTitle	CSS
#TabList	CSS
#TabList li	CSS
#TabList li a	CSS
#TabList li a.current	CSS
#TabList li a.current:hover	CSS
#TabList li a.current:link	CSS
#TabList li a.current:visited	CSS
#TabList li a:hover	CSS
#tabNextImg	CSS
#tabNextSelect	CSS
#tabPrevImg	CSS
#tabPrevSelect	CSS
#vScreenOverlav	CSS

Search: []

New Update Copy Mass Change

Theme Defs for #InfoBoxBannerClose

Theme Description

Standard

New Update Copy

View: Standard Class Definition Selected Theme Definition Selected Platform Definition

#InfoBoxBannerClose Class Definition

#InfoBoxBannerClose Notes

InfoBox Banner Close CSS

Platform Defs for #InfoBoxBannerClose

Platform Description

No Platform Definitions exist for #InfoBoxBannerClose

New Update Copy

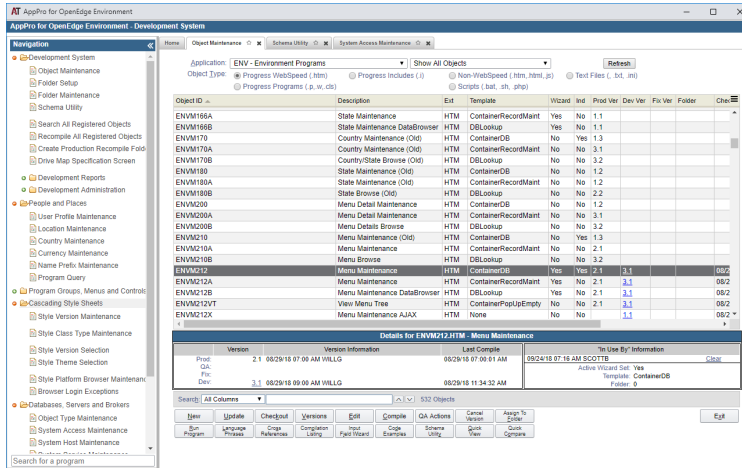
Remember to "Generate Style Sheets" after modifications are completed.

Mass Change functionality is available throughout the CSS Management System to allow for the replacement of one string value with another string value. This is especially useful in changing all occurrences of one color when creating a new theme definition.

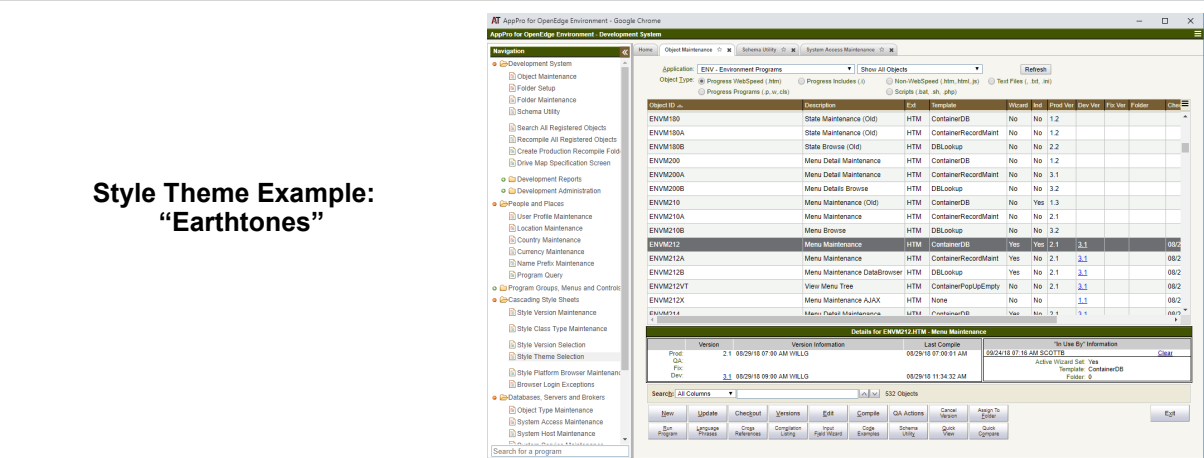
The Style Themes and Style Platforms can have additional / override information created for them. The Standard Definition of the Style Class being maintained is displayed above the Theme or Platform specific information.

Style Themes

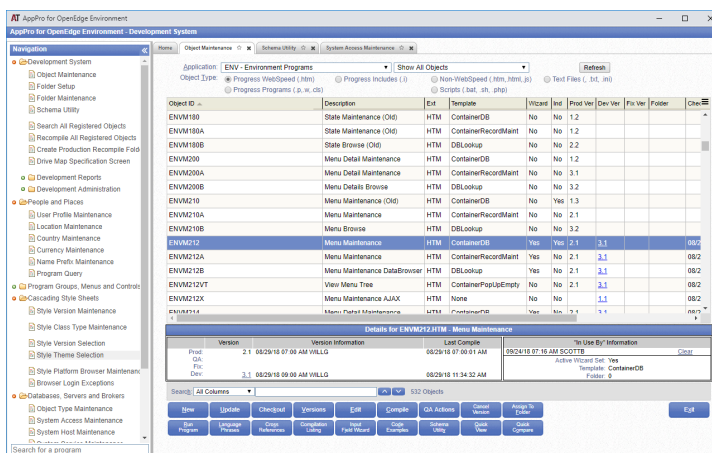
By using the Cascading Style Sheet Maintenance and automatic CSS file generation process, a developer can quickly change the appearance of a Web application. A unique CSS file is generated for each defined theme and browser combination. The appropriate CSS file is automatically assigned to a user session based on the current theme and the internet browser being used. Style Themes allow organizations to create Web designs that are uniquely their own. The following menu and program examples illustrate the power of CSS by significantly modifying the appearance of various web applications when utilizing different CSS Style Themes.



Style Theme Example: "Standard"

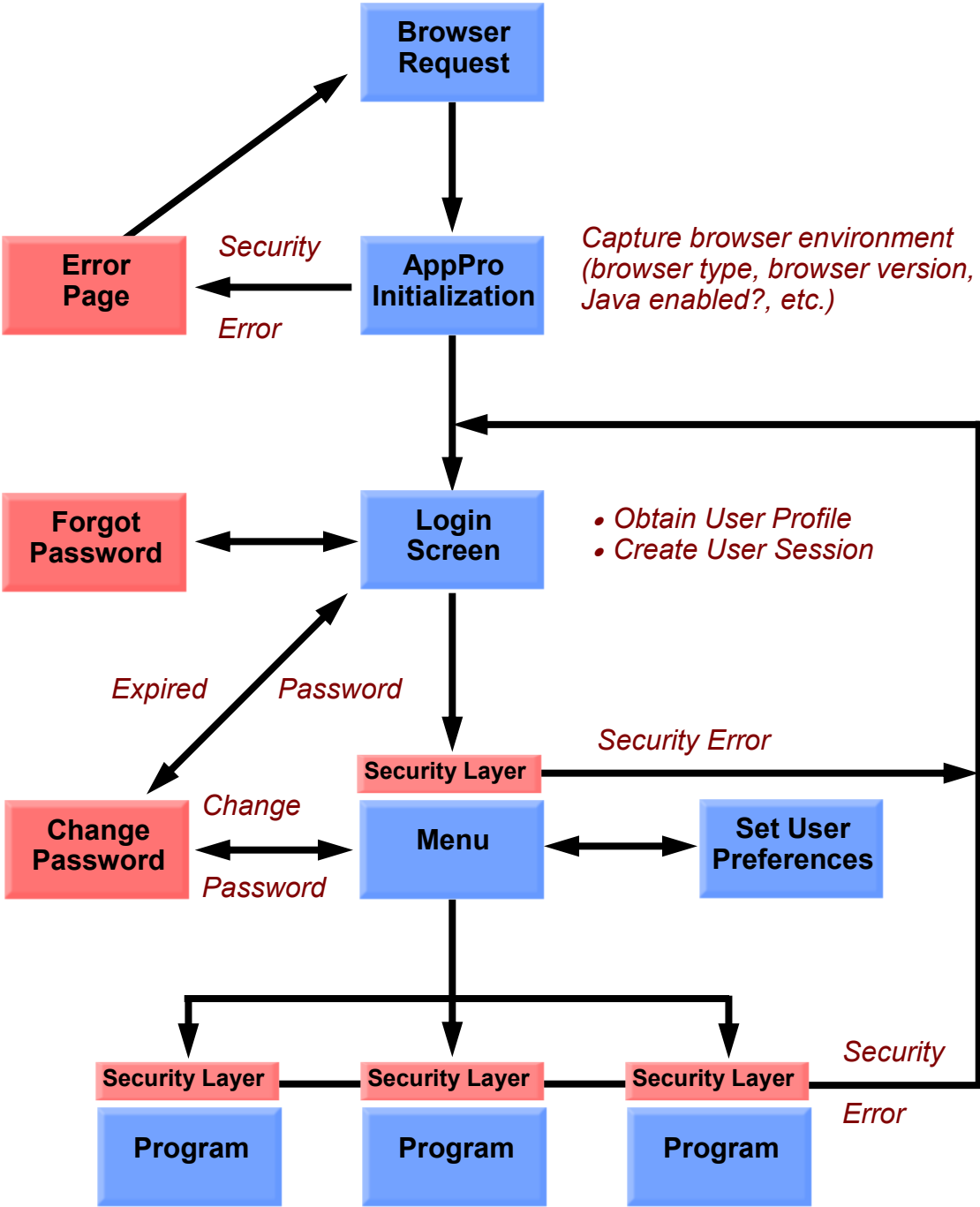


Style Theme Example: "Earthtones"



Style Theme Example: "Flex Blue"

Login / Password / Security Flow Diagram



Login / Forgot Password / Expired Password / Change Password

The user login and password management process verifies that users have proper access authorization to your business applications. If a user forgets their password, they may request a new password to be emailed to their registered email address. Users are required to change their password upon expiration. A user may also request a password change prior to its expiration date. Upon successful login to the system, the user's profile determines the application programs that can be accessed. The **AppPro** framework can also support the integration of LDAP (Active Directory) or other authentication services for controlling the user login process.

Forgot Password Process

The screenshots show the following steps in the forgot password process:

- Step 1:** The main login page with fields for Login ID (containing 'SCOTTB') and Password, and a 'Forgot your password?' link.
- Step 2:** A 'Password Assistance' dialog box asking 'Did you forget your password?' with fields for Login ID (containing 'SCOTTB') or First and Last Name.
- Step 3:** A 'Password Assistance' dialog box for user Scott D. Blaubach, asking 'What is your mother's maiden name?' with an 'Answer:' field and a 'Send Password To:' section with radio buttons for 'Registered e-mail address' (selected) and 'Screen'.

If a user forgets their password, they may request that a new password be emailed to their registered email address by providing either their Login ID or Name.

The user must successfully answer their predetermined "Forgotten Password" question in order to reset their password.

Change Password Process

The screenshots show the following steps in the change password process:

- Step 1:** A 'Change Password' dialog box with fields for Current Password, New Password, and Confirm New Password, and 'OK' and 'Cancel' buttons.
- Step 2:** A 'Microsoft Internet Explorer' warning dialog box stating 'Your password must be changed before continuing.' with an 'OK' button.

Users are required to change their password upon expiration. A user may also request a password change prior to its expiration date.

Features	Benefits
<p>Standard Program Templates and Wizards</p> <ul style="list-style-type: none"> The maintenance templates provide logic to perform the New, Update, Copy and Delete functions with appropriate developer interaction points. Other functions are easily added by using the button definition utility. The data browser template presents multiple data records to the user in a scrollable data grid. The “AJAX extended data” feature allows for additional information related to a selected data record to be easily accessible outside of the data grid without fully re-posting the page to the web server. The search function allows you to search for any string value in any of the displayed data fields. The Pop-Up template presents data in a “pop up” window when a lookup button is clicked for a specific data field. The pop up window returns the selection to the calling program. 	<p>Program Generation Wizards provide a quick method of automatically generating programs based on underlying Program Templates.</p> <p>Standard Program Templates provide a consistent user interface for presenting and maintaining data.</p> <p>Developers have full access to source code so any functions needed that are outside of the template logic can be easily created.</p> <p>Changes to template functionality can be replicated to all associated programs with a simple recompile.</p>
<p>Program Source Version Control</p> <p>AppPro provides a Program Source Version Control that allows for the registration and maintenance of all programs / objects used within the web environment. The developer can checkout, edit, and compile registered programs. Multiple versions of programs are retained for future comparisons and possible production rollback.</p> <p>Each program checkout can be linked to a particular project for tracking all program changes associated to that project. Once testing of the modifications has been completed, the program / object is assigned to an implementation folder for transfer to the Quality Assurance (optional) and Production environments. Objects that can be registered include web programs, applets, scripts, graphic images, include files, functions, and HTML documents.</p>	<p>Program Source Version Control supplies a structured development environment that provides visibility to all programs / objects used within the web environment.</p> <p>Version Control helps insure against accidental loss of programs / objects and provides a method for tracking the modifications made to each object version.</p>
<p>Common Function Utilities</p> <ul style="list-style-type: none"> Numeric Validation is available to verify that the user input value matches the numeric edit mask that the developer has specified for a given numeric field. Both integer and decimal formats are supported. Any non-numeric value or any numeric value that doesn't match the specified edit mask will result in an error message. Both European and American numeric formats are supported. Date Validation is available to verify that the user input value matches the date edit mask the developer has specified for a given date field. Multiple edit masks are supported. Both European (DMY) and American (MDY) formats are supported. Button Definitions quickly and consistently generate dynamic buttons with either one or two lines of text. Through the use of AppPro's Cascading Style Sheet generation process, the color and font of the buttons are easily changed to match the chosen theme of the page being displayed. 	<p>AppPro's common function utilities improve developer productivity and consistency, providing for improved end user ease-of-use and immediate client-side data validation.</p> <p>The developer can designate the edit mask to use on each numeric and date field, alleviating the need to write specific code to ensure conformity.</p> <p>Developers can quickly create buttons that are dynamically rendered based on the CSS specifications. Individual button graphic files do not need to be created for each button or theme, saving development time and providing accelerated page rendering.</p>

Features	Benefits
<p>On-line Cascading Style Sheet (CSS) Management</p> <p>CSS defines how web pages will be displayed by assigning "Style Classes" to various elements on a web page. By changing an attribute of a Style Class, all references of that Style Class immediately inherit the new characteristics. AppPro provides an on-line CSS management system, allowing for the system generation of CSS files. Style Classes are defined for nearly every aspect of the AppPro environment. "Style Themes" are also available to create unique web page themes. Internet browser specific characteristics are maintained at the "Style Platform" level to compensate for the idiosyncrasies between browsers (Internet Explorer vs. Netscape) and versions (IE 5.6 vs. IE 7.0). CSS version control is maintained to allow reverting back to previous CSS versions, if necessary.</p>	<p>By using the CSS maintenance programs and CSS file generation process, the appearance of the web pages can be quickly changed. A unique CSS file is generated for each theme and browser combination. The appropriate CSS file is automatically assigned to a user session based on the current theme and internet browser being used.</p> <p>Style Themes allow organizations to create web applications that are uniquely their own.</p>
<p>User Profile and User Access Management</p> <p>A User Profile is maintained for each user, including name, address, contact information, password expiration, and user preferences. Users can be granted access to one or more application environments (i.e. Order Entry Test vs. Production).</p>	<p>User profile and application security is easily maintained. User preferences include the choice between European and American date and numeric formats.</p>
<p>Common Security Plug-in for Programs</p> <p>AppPro provides a common security plug-in that contains various security checks, including program access security, user session timeout logic (based upon your predetermined timeout criteria) and logic to ensure that one of several security violations has not occurred. If any security breaches are detected, the user session is terminated and a new user session login is required.</p>	<p>The program security plug-in provides common security validations each time a web page is posted. Each user profile is assigned to various Program Groups, making user program access security maintenance quick and easy.</p>
<p>Multi-Language Translation Functionality</p> <p>AppPro allows translation of text phrases associated to messages, field labels, buttons, program names and menu names. Phrase can be programmed in any language, and the Language Phrase Translation functions allow for easy on-line translation to any desired languages.</p>	<p>Developers code the phrases in their preferred language while users view them in their preferred language. No programming changes are required for this translation, only on-line translation maintenance.</p>
<p>Database-driven User and Session Values</p> <p>AppPro's "Get" and "Put" functions are available to easily store and retrieve data values unique to a specific user or a specific user session. These values are stored in the database rather than writing "cookies" to the user's workstation. Some users do not allow cookies to be written to their workstations, forbidding the developer from retaining information about the user or user session.</p>	<p>Storing User Profile and Session values on database tables give the developer control over "cookies" and the ability to track any user selections that were generated. AppPro makes available to each program many "global variables" that contain the user and session environment information.</p>
<p>System Control Maintenance</p> <p>System Control records provide a centralized repository of all developer defined system program parameters. These records allow the developer to define and label an unlimited number of Character, Integer, Date, Logical, and Decimal fields. A version of each control record is maintainable in the Test, QA, and Production environments, so changes can occur in one environment without affecting the other environments.</p>	<p>The developer can quickly define and assign system control records instead of "hard coding" system parameters inside programs or defining new database tables for simple control data storage.</p>

AppPro for OpenEdge

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framework for PAS OpenEdge / WebSpeed

Are you needing a jump-start to your Progress web business application development initiatives? Are you looking to transform your existing Progress GUI or character applications to the web? If so, **App Technologies** consulting services, combined with the **AppPro for OpenEdge** web business application development framework, is the solution you have been searching for.

App Technologies consulting services and the **AppPro for OpenEdge** web business application development framework have been the cornerstone to our client's success for their Progress OpenEdge application development projects. This winning combination provides the foundation for a solid web development and deployment infrastructure.

To learn more about how **AppPro for OpenEdge** can benefit your organization, please call 262.478.0040 or e-mail us at sales@apptechnologies.com. Please visit www.apptechnologies.com to view a live demo.

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