

# Intro to Web Client Development

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# What is Web Client

- 100% pure HTML
- Ajax and XML: not a bunch of web forms
- it runs server side
- it only requires a web browser

# Web Client Vs Smart Client

|                      | <b>Smart Client</b> | <b>Web Client</b> |
|----------------------|---------------------|-------------------|
| <b>Deployment</b>    | easy install/update | no install/update |
| <b>Accessibility</b> | ports 8080, 1099    | port 8080         |
| <b>GUI</b>           | richer GUI          | web 2.0 GUI       |
| <b>Coding</b>        | fast                | fast              |
| <b>Debugging</b>     | easy                | easy              |
| <b>Support</b>       | easy                | very easy         |

# Web Client Vs Smart Client

**Q: How to choose?**

# Web Client Vs Smart Client

**Q: How to choose?**

**A: Don't choose, use both!!**

# Web Client Vs Smart Client - DEMO

The screenshot displays a web browser window titled "SintProSystem - Main - Servoy Web Client - Windows Internet Explorer". The address bar shows the URL: `http://localhost:8081/servoy-webclient/?x=Nksv8FUwAM2YITQlwMDvzA`. The browser's menu bar includes "File", "Modifica", "Visualizza", "Preferiti", and "Strumenti". The page content is divided into a left sidebar and a main area.

**SintPro System** sidebar menu items:

- Home
- CRM System
  - Portfolio Clienti
- Fatturazione
  - Lista Fatture**
  - Ricerca Fatture
  - Statistiche Fatture
- CustomerCare System
  - Project Manager
  - License Manager
- CMS System
  - Web News
- Settings
  - GUI Settings
  - Invoice Settings
- Administration
  - Gestione Gruppi
  - Gestione Utenti
  - Logins Log
  - Servoy Console
- Framework Settings
  - Menu Configuration
  - Other Settings
- Other Modules
- Hippocrates
  - Prontuario Medico
- Logout

**Invoices - List** main area:

Rec. n. 1/9 ( found recs: 9)

| N. | Series | Date       | Customer                               | Total    | Payment method | Expiry     | Payment |
|----|--------|------------|--|----------|----------------|------------|---------|
|    |        | 12-07-2007 | Servizi Integrati Professionali s.a.s. |          |                | 12-07-2007 |         |
| 1  | A      | 14-02-2007 | Batchelor Associates Ltd               | €1740,00 |                | 16-03-2007 |         |
|    |        | 27-04-2006 | Servizi Integrati Professionali s.a.s. |          |                | 27-04-2006 |         |
| 1  |        | 23-03-2006 | Direct ICT                             | €95,00   |                | 22-04-2006 |         |
| 2  |        | 23-03-2006 | Sprint Computer Services s.r.l.        |          |                | 23-03-2006 |         |
| 3  | A      | 23-03-2006 | Sprint Computer Services s.r.l.        |          |                | 23-03-2006 |         |
| 2  | B      | 24-02-2006 | Servizi Integrati Professionali s.a.s. | €780,00  |                | 26-03-2006 |         |
| 2  | A      | 24-02-2006 | Servizi Integrati Professionali s.a.s. |          |                | 24-02-2006 |         |
| 1  | A      | 24-02-2006 | Servizi Integrati Professionali s.a.s. |          |                | 24-02-2006 |         |

At the bottom of the main area, there is a "Totals" row:

|        |          |         |          |
|--------|----------|---------|----------|
| Totals | €2245,00 | €370,00 | €2615,00 |
|--------|----------|---------|----------|

The bottom status bar shows "nick - Administrators", a "New" button, and a system tray with "Pronto", "Intranet locale", and "100%" zoom.

# Web Client gotchas

- What is not available:
  - access to the client hardware
  - beans using Swing
  - anchors
  - the Dialogs plugin
  - List Views
- What behaves differently:
  - AutoSave()
  - Navigation: no vertical scrollbars in lists
  - Form In Dialog

# Best Practices

- GUI Design: web page or desktop application style?
- No autosave: use Edit/Cancel/Save buttons
- Use a Main form and load other forms in a tabpanel
- Correct usage of Form In Dialog
- Set form sizes correctly and align elements
- Always use CSS styles

# Best Practices: GUI design

- GUI Design: web page or desktop application style?
  - use a web page design for simple webclient only projects, use a richer interactive interface for cross-client development
  - be consistent in your GUI!
  - design your GUI for a reasonable monitor resolution
  - test on several Browsers to go cross-platform and cross-browser
  - keep in mind that you're on the web now

# Best Practices: no AutoSave

- No autosave: use Edit/Cancel/Save buttons:
  - you always have to save explicitly
  - you can't find when there is unsaved data, use:  
`if(!controller.find()) databaseManager.saveData();`
  - you can't sort when there is unsaved data
  - design a global navigation system and use it all over your solution

## Best Practices: use a Main form

- Use a Main form and load other forms in a tabpanel:
  - the default navigator looks ugly on the web
  - you have more control over your forms
  - it's easier to define a global navigation system and prevent users from leaving unsaved data around
  - it's a good workaround for the browsers Back button
  - it's easier to implement different GUI in special situations: `getApplicationType()` is your friend

# Best Practices: Form in Dialog

- Correct usage of Form In Dialog:
  - Modal and Non-Modal dialogs
  - show the dialog as the last step of your method
  - use a callback method in the onClose event of your dialog
  - beware of browsers popup blockers
  - always remember that your solution will run in a browser

# Best Practices: size does matter!

- Set form sizes correctly and align elements:
  - table views don't auto-extend vertically
  - table views: align fields properly to not exceed the available horizontal space
  - table views: headers sizes are based on the length of the text property of fields
  - limit the usage of horizontal scrollbars
  - always design the GUI for the minimum planned web screen size and rely on anchors for smart client

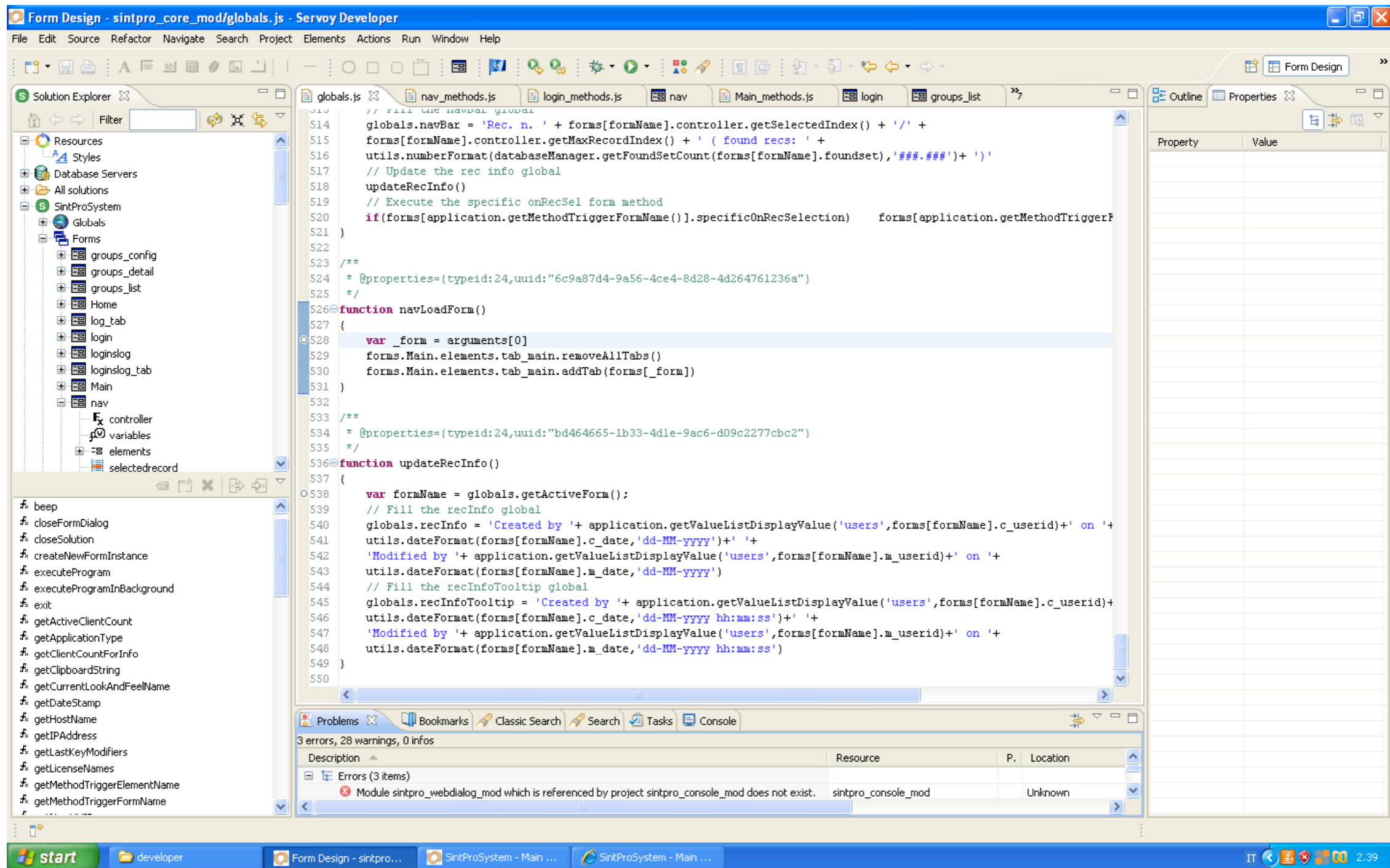
# Best Practices: CSS styles

- Always use CSS styles
  - it's easier to change the look of your solution if needed
  - it's easier to implement changes when new CSS properties get supported
  - it's easier to debug your Web Client GUI
  - it's nice to have separate Web and Smart Client styles and switch them at runtime based on the Client type

# SintPro webDialog module

- a replacement for the Dialog plugin
- works both in Smart and Web Client
- supports i18n
- it's free
- it's open source
- available for download shortly at [www.sintpro.com](http://www.sintpro.com)

# SintPro webDialog module - DEMO



The screenshot displays the Servoy Developer IDE interface. The main window shows the 'Form Design' view for the file 'sintpro\_core\_mod/globals.js'. The code in the editor includes the following functions:

```
514 // Fill the navbar global
515 globals.navBar = 'Rec. n. ' + forms[formName].controller.getSelectedIndex() + '/' +
516 forms[formName].controller.getMaxRecordIndex() + ' ( found recs: ' +
517 utils.numberFormat(databaseManager.getFoundSetCount(forms[formName].foundset), '###.###') + ' )'
518 // Update the rec info global
519 updateRecInfo()
520 // Execute the specific onRecSel form method
521 if (forms[application.getMethodTriggerFormName()].specificOnRecSelection) forms[application.getMethodTriggerF
522 ]
523 /**
524  * @properties={typeid:24,uuid:"6c9a87d4-9a56-4ce4-8d28-4d264761236a"}
525  */
526 function navLoadForm()
527 {
528     var _form = arguments[0]
529     forms.Main.elements.tab_main.removeAllTabs()
530     forms.Main.elements.tab_main.addTab(forms[_form])
531 }
532
533 /**
534  * @properties={typeid:24,uuid:"bd464665-1b33-4d1e-9ac6-d09c2277cbc2"}
535  */
536 function updateRecInfo()
537 {
538     var formName = globals.getActiveForm();
539     // Fill the recInfo global
540     globals.recInfo = 'Created by ' + application.getValueListDisplayValue('users',forms[formName].c_userid)+' on ' +
541     utils.dateFormat(forms[formName].c_date,'dd-MM-yyyy')+' '+
542     'Modified by ' + application.getValueListDisplayValue('users',forms[formName].m_userid)+' on ' +
543     utils.dateFormat(forms[formName].m_date,'dd-MM-yyyy')
544     // Fill the recInfoTooltip global
545     globals.recInfoTooltip = 'Created by ' + application.getValueListDisplayValue('users',forms[formName].c_userid)+
546     utils.dateFormat(forms[formName].c_date,'dd-MM-yyyy hh:mm:ss')+' '+
547     'Modified by ' + application.getValueListDisplayValue('users',forms[formName].m_userid)+' on ' +
548     utils.dateFormat(forms[formName].m_date,'dd-MM-yyyy hh:mm:ss')
549 }
550
```

The Properties window on the right is empty. The console window at the bottom shows the following error:

| Description   | Resource            | P. | Location |
|---|---------------------|----|----------|
| Module sintpro_webdialog_mod which is referenced by project sintpro_console_mod does not exist. | sintpro_console_mod |    | Unknown  |

# Conclusion

We have learned:

- differences between smart and web client
- best practices for hybrid development
- how to handle dialogs in web client

More information:

[www.sintpro.com](http://www.sintpro.com)

Q & A

Next up: Advanced WebClient Development and Deployment - Nicola Gervasi, SintPro