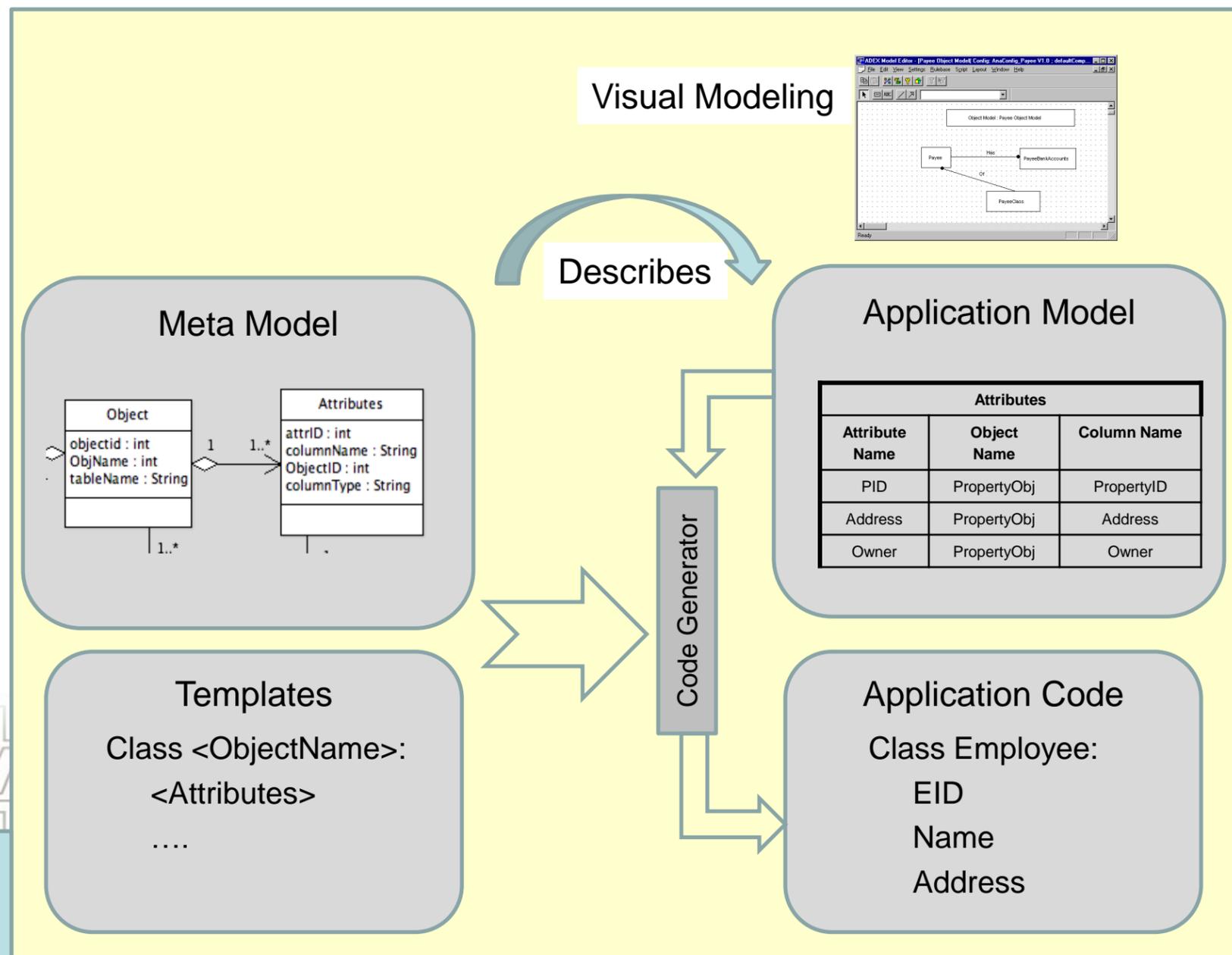


InstantApps: A WYSIWYG Model Driven Interpreter for Web Applications

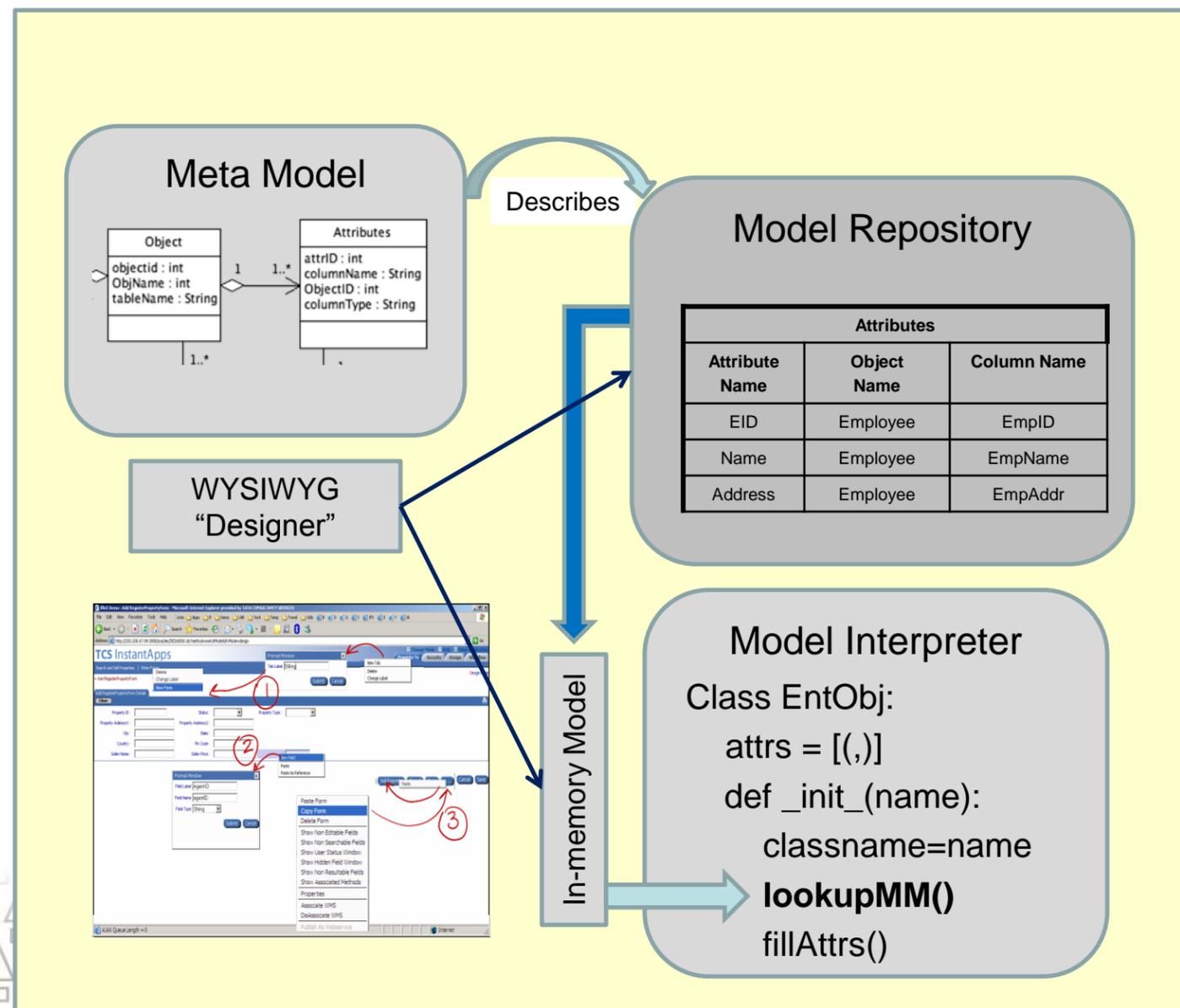
Gautam Shroff (TCS), Puneet Agarwal (TCS) and Premkumar Devanbu (UC Davis)

Traditional MDA = Code Generation



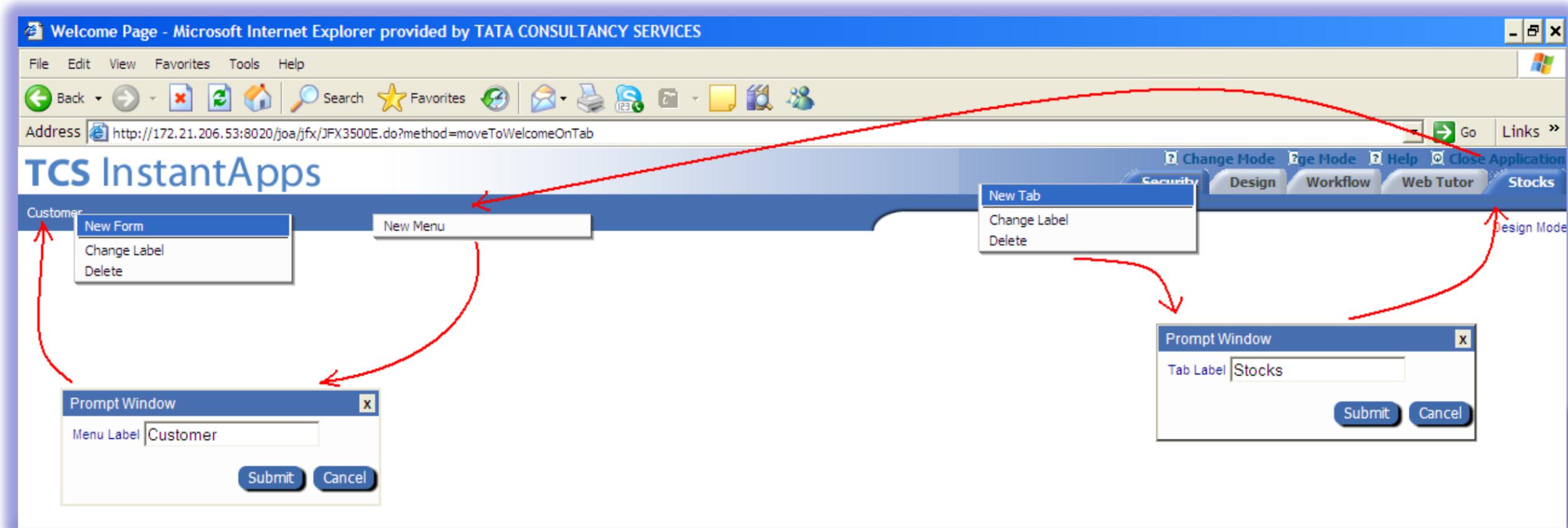
1. Visual Modeling is used for creation of Application Model (e.g. UML)
2. Code Generator picks the variable part of code templates from Application Model and generates code.
3. Compile, re-build (package) and deploy before run.
4. Changing anything involves changing Application Model, then regenerating the code, compile, package, deploy and then run again.

InstantApps is a WYSIWYG – Model Driven Interpreter

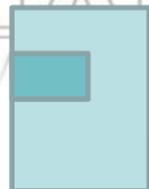


1. WYSIWYG Designer is used for creation of Application Model.
2. Interpreter picks the configurable part of player from Application Model and runs the application.
3. No need of Compile, re-build (package) and deploy before run.
4. Changing anything involves changing through WYSIWYG Designer while running.

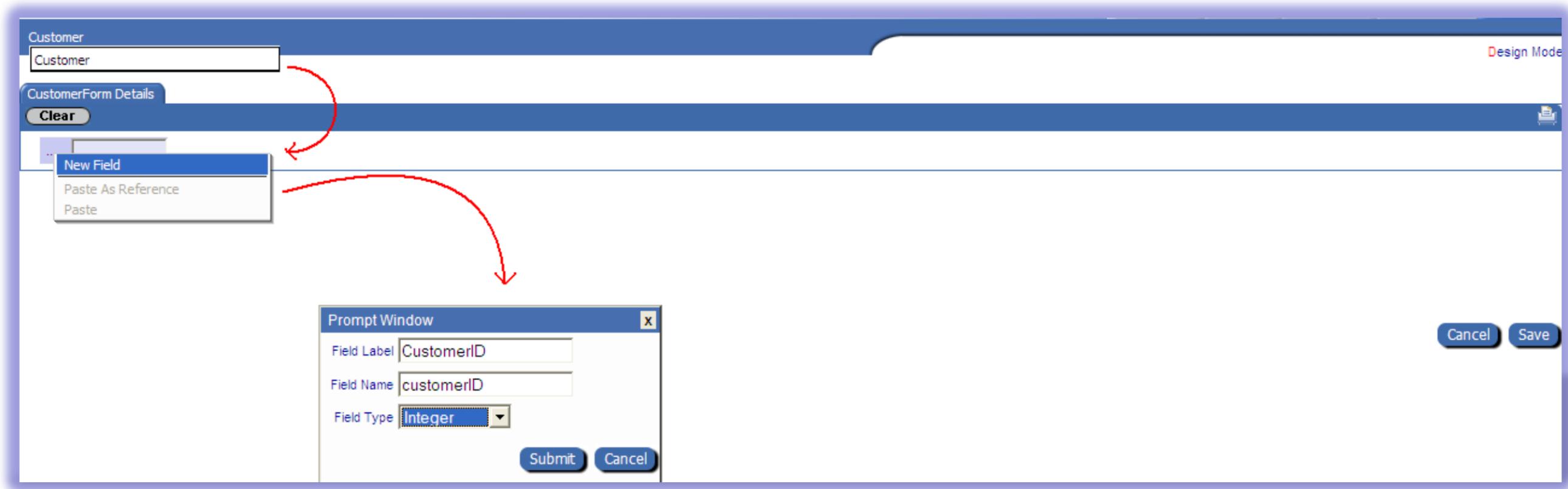
WYSIWYG : Menu Creation



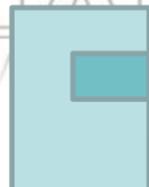
1. In 'Design Mode', right-click at any position shows designer options.
2. Right-click on any tab and choose the 'New Tab' menu option, enter tab name and a new tab immediately appears on the screen
3. Right-click within a tab, choose 'New Menu' and name it, the new menu appears.



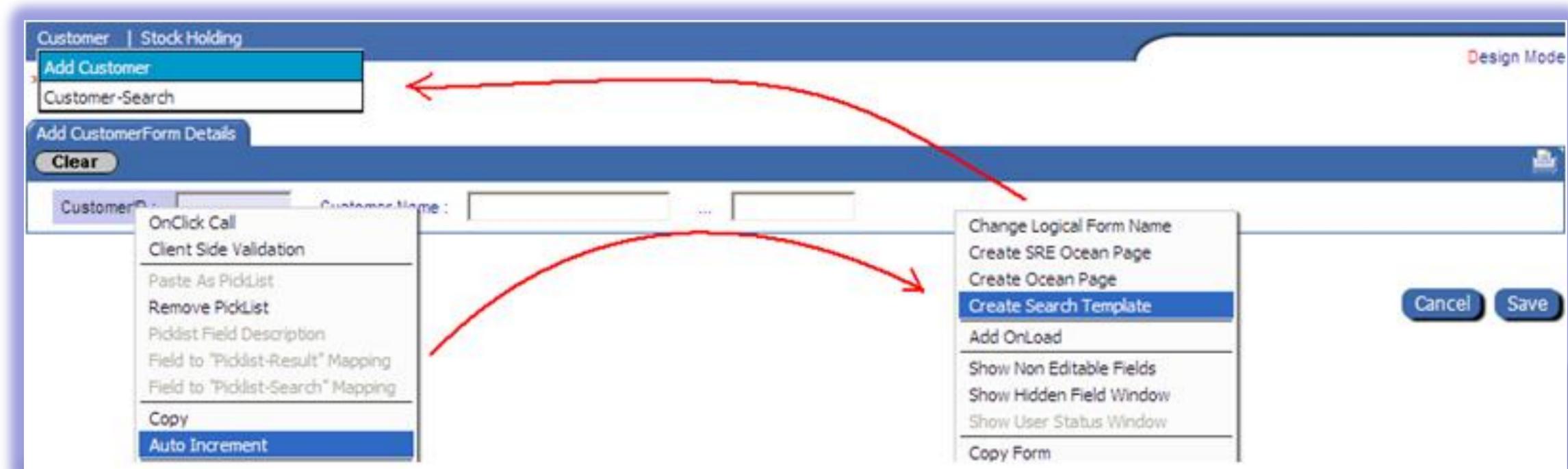
WYSIWYG : Form Design



1. Right-click on a menu, choose 'New Form', give a name and a blank form appears.
2. Right-click on a blank field, click 'New Field', give a name and type; it appears.



WYSIWYG : Field Properties and Search Screens



1. Right-click on a field and change its properties, such as 'Auto Increment', etc.
2. Choose 'Create Search Template' on a form menu and a search screen for it is available in the application menu and users can access the search screen on click of it.



WYSIWYG: Navigation Links

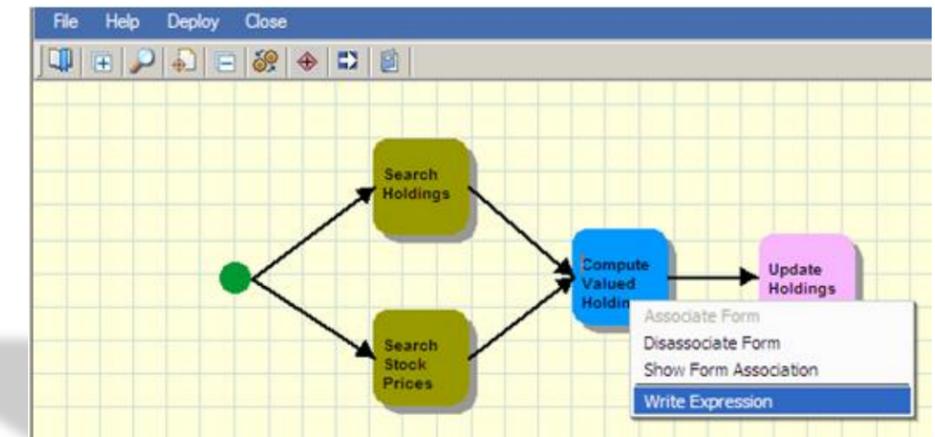
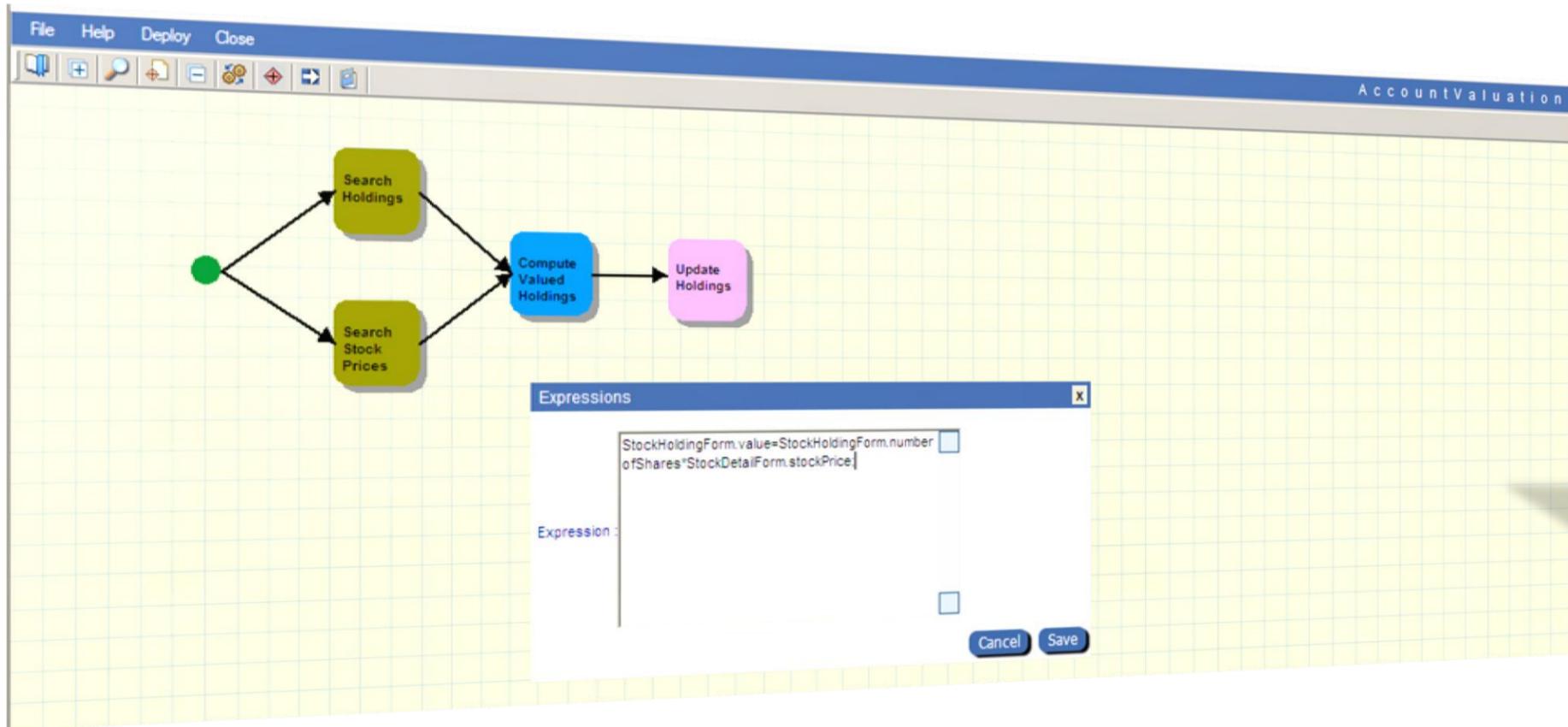
The screenshot shows a form titled 'Add StockHoldingForm Details' with a 'Clear' button. The form contains input fields for 'HID', 'Customer Name', 'Stock Name', and 'Number of Shares'. A context menu is open over the form, listing actions such as 'Change Logical Form Name', 'Create SRE Ocean Page', 'Create Ocean Page', 'Create Search Template', 'Add OnLoad', 'Show Non Editable Fields', 'Show Hidden Field Window', 'Show User Status Window', 'Copy Form', and 'Paste Form'. The 'Copy Form' option is highlighted. 'Cancel' and 'Save' buttons are visible on the right side of the form.

1. 'Copy' a form.
2. Navigate to the 'result page' of another form and 'Paste' it on the blank button.
3. Form to Form Navigation with common fields being carried over, is immediately enabled.

The screenshot shows a 'List' view with a table containing one row with 'CustomerID' and 'Customer Name' columns, where the value is '1 TCS'. Below the table is a 'StockHolding' button. A red arrow points from the 'StockHolding' button to a 'Paste As Page Flow Button' button. The 'Add StockHoldingForm Details' form is visible at the bottom, with the 'Customer Name' field populated with 'TCS'. 'Cancel' and 'Save' buttons are at the bottom right.



Logic Maps



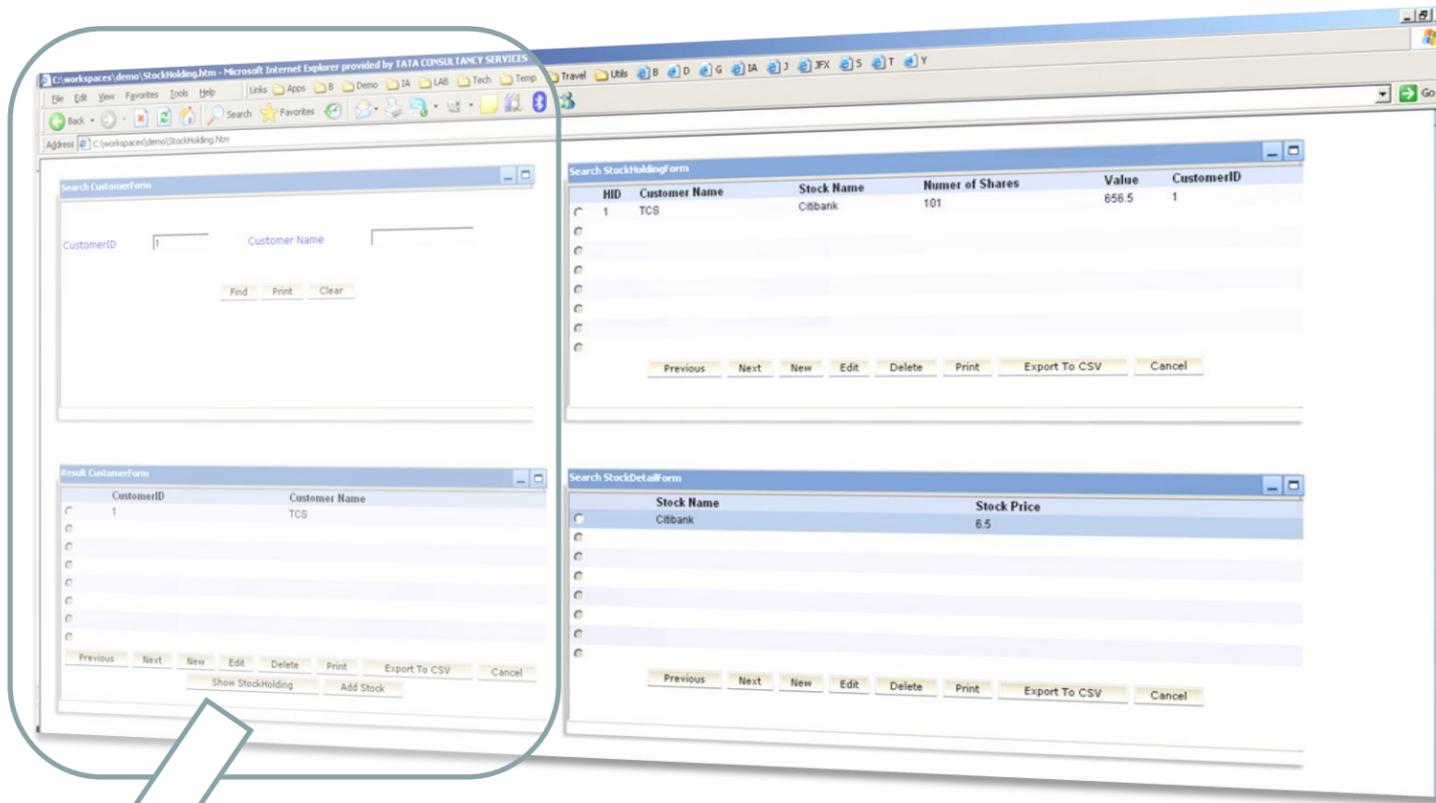
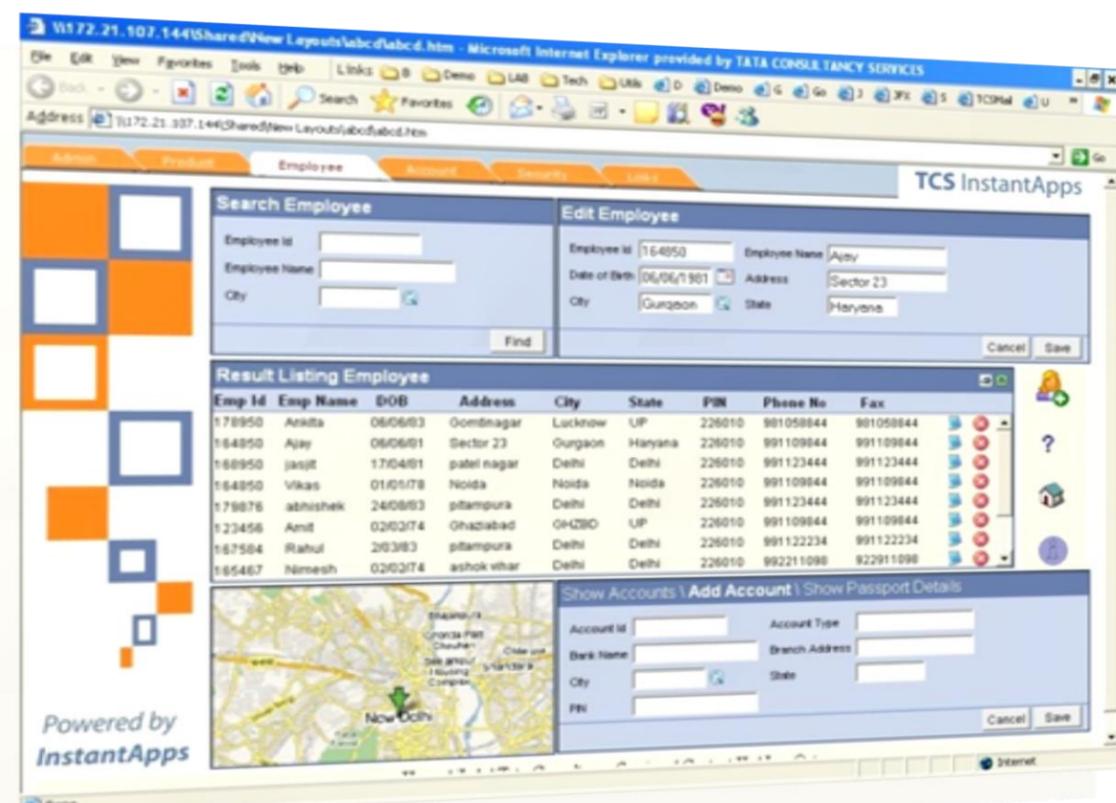
1. Server-side data manipulation logic using a graphical Map-Reduce based language
2. Editable in the browser through Search, Create, Update, Delete, Compute nodes.
3. Compute nodes can have arithmetic expressions.

The screenshot shows a browser window with a "Modify CustomerForm Details" form. Below the form, there is an "Associate Logic Map" dialog box. The dialog has a "Search Block" section with a "Find" button, and fields for "Logic Map Name" and "Logic Map ID". There are three radio buttons: "After Create" (selected), "Before Create", and "Instead Of Create". Below this is a "Search Results" table:

Logic Map Name	Logic Map ID
<input type="radio"/> ScheduleStudent	LOGIC:MScheduleStudentGSWebTutor1223379096959
<input checked="" type="radio"/> AccountValuation	LOGIC:MAccountValuationGSWebTutor1226296240174

At the bottom of the dialog is an "Associate Logic Map" button. To the right of the dialog, a context menu is open, showing options: "Edit OnLoad", "Show Non Editable Fields", "Show User Status Window", "Associate Java Logic", "Associate Logic Map" (highlighted), "Show/Delete Logic", and "Properties". A red arrow points from the "Associate Logic Map" option in the context menu to the "Associate Logic Map" button in the dialog.

Custom User Interface & Mash-Ups



```

var searchCustomer = new IA_Form("IA_islet1",
"CustomerForm", "Search", "1%", "1%", "33%", "38%");
searchCustomer.callIAForm();

var resultCustomer = new IA_Form("IA_islet2",
"CustomerForm", "Result", "40%", "1%", "34%", "30%");
resultCustomer.callIAForm();

var event = new IA_Event("IA_islet1", "IA_islet2",
"Find");

event.callIAEvent();
    
```

1. Rich Internet Applications can be created using InstantApps Mash-ups
2. Can be Mashed-up into an existing Web application with little effort.
3. Developer friendly APIs are available to navigate the HTML DOM and to manipulate the look and feel.