

BASIS Brews a New Product

Barista at a Glance



Brewing up GUI Apps With Barista Application Framework

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Almost as fast as the Starbucks barista turns milk, java beans, and water into a hot frothy cappuccino, the BASIS Barista™ rapidly turns data and legacy business logic into a shiny new BBj® graphical application!

Meet Barista – a powerful new framework that allows developers to build an application quickly by simply defining the data and its interrelationships. Barista is not a code generator; rather, it provides a standard framework that handles the ubiquitous navigation, display, search, and file maintenance requirements of the typical data-driven GUI application. While it provides callpoints to enable the developer to include proprietary business logic, Barista itself handles the vast majority of the standard application programming, providing a fast way to create modern-looking applications like the sample shown in **Figure 1** with existing or new data sets.

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The screenshot displays a web-based application window titled "Acme Manufacturing Company - Barista Application Framework". The interface includes a menu bar (File, Record, Edit, View, Design, Help, Window), a toolbar with various icons, and a left-hand navigation pane. The navigation pane is divided into sections: Administration, Development, Tutorials (selected), and Utilities. Under Tutorials, there is a tree view with items like Customer, Salespersons, Shipping Zones, Shipping Methods, Credit Codes, and States. Below this are sections for Shortcuts, History (showing "TUT_CUSTOMER - Customer"), and Processes.

The main content area is titled "Customers" and displays a form for "Customer ID: 000006". The form fields are as follows:

- Company: FishLand
- First Name: Dave
- Last Name: Strum
- Address Line 1: 6441 Concord Street
- Address Line 2: (empty)
- City: Hagerstown, ST: MD (dropdown), Maryland (lookup)
- Zip: 21740-
- Country: US
- Phone No: 301.272.9987
- Fax No: . .
- Salesperson: CAU (lookup), Constance Anne Unger
- Ship Zone: 04 (lookup), Zone 04 (400 mi.)
- Credit Code: 01 (lookup), COD
- Ship Method: UPGR (lookup), UPS Ground

Below the form is a "Balances" section with the following data:

Current Bal:	9.00	Sales - MTD:	.00
Over 30 Days:	.00	Sales - YTD:	165.20
Over 60 Days:	165.20	Sales - Last Yr:	.00
Over 90 Days:	.00	Last Purchase Date:	10/16/1993
Over 120 Days:	.00	Last Payment Date:	08/05/1992

The status bar at the bottom of the window shows "HDR PC 07/25/2007 v1.0".

Figure 1. Customer Data Maintenance

Data Driven

To build an app in the Barista Application Framework, the developer begins by defining the types of data the application will use, as shown in **Figure 2**. In addition to defining the size and type of each data element, the developer also specifies how to display, validate, and store the field.

Next, the developer defines a table based on those data elements, specifying the file name, file type, record layout, and key structure shown in **Figure 3**.

continued...

Element Types

Element Type ID: TUT_SALESPERSON Creation Date: 07/05/2007
 Description: Salesperson Revision Date: 07/05/2007

Definition Validation

Check Box Data: []

Table Based

Validate Data Table: TUT_SALESPERSON Salespersons
 Data Column: NAME
 Data Key: []
 Data Key Name: []

Additional

Minimum Length: 0 Data Expand Code: []
 Maximum Length: 0 Data Compress Code: []
 Maximum Rows: 0 Pad Character: Space
 Minimum Value: [] Pad Justify: Left
 Maximum Value: [] Precision: 0
 System Dialog: (none)

Figure 2. Establishing validation and query rules for an element type

Tables

Table Alias: TUT_CUSTOMER Created: 07/05/2007
 Description: Customers Revised: 07/05/2007
 Window Title: Customers

Alias Definition

Alias Type: XKeyed File Key Length: 0
 Parent Alias: [] Records: 0
 Primary Table: [] Record Length: 0
 Disk File Name: CUSTOMER
 Table Path: [+TUDATA]

Security

Internal RDE Record? Restrict Table Rebuild? Solution Comp ID: BAS
 System ID: [] Export to Inquiry System? Solution Prod ID: TUT
 Inquiry Restrict

Element Type	Description	Data Element	Mult	Occ	Delim?	Delim Char
TUT_CUSTOMER_ID	Customer ID	CUSTOMER_ID			No	
TUT_TEXT_20	Text	FIRST_NAME			No	
TUT_TEXT_30	Text	LAST_NAME			No	
TUT_TEXT_30	Text	COMPANY			No	
TUT_TEXT_30	Text	BILL_ADDR1			No	
TUT_TEXT_30	Text	BILL_ADDR2			No	
TUT_TEXT_20	Text	CITY			No	
TUT_STATE_ID	State ID	STATE_ID			No	
TUT_TEXT_20	Text	COUNTRY			No	
TUT_POSTCODE	Postal Code	POST_CODE			No	
TUT_PHONE_NO	Phone No	PHONE			No	
TUT_PHONE_NO	Phone No	FAX			No	
TUT_SALESPERSON	Salesperson	SALESPERSON			No	

Options >>...

Figure 3. A table created in Barista Application Framework

Finally, the developer builds a maintenance program like the one shown in **Figure 4** using the Barista Form Designer.

The generated screen interacts with the toolbar (**Figure 5**) at the top of the Barista MDI window and allows for the navigation, search, creation, etc. of records. The binoculars toward the middle of the toolbar initiate an inquiry of the current table, as shown in **Figure 6**. This provides the user with a quick way to look up any record within the table.

continued...

Figure 4. The Customers form as originally created by Barista



Figure 5. The Barista MDI Toolbar

Cust ID	Comp	First	Last	City	ST	Zip	Country	Phone No
000001	Bogus Stuff	Gregory	Baldrake	Albuquerque	NM	87111	US	505.335.5525
000002	Betsy Inc	Betsy	Heebink	Madison	WI	53711	US	608.334.2442
000003	Tasteful Gifts	Wesley	Osborn	Seattle	WA	98155	US	206.334.2421
000004	Long Island Inc	Harry	Chuckie	Palm Springs	CA	99812	US	619.782.9214
000005		Stephanie	McIntyre	Modesto	CA	95350	US	209.210.7793
000006	FishLand	Dave	Strum	Hagerstown	MD	21740	US	301.272.9987
000007	Greencastl Moose Farm	Dr. Jane	Booker	Greencastle	PA	17225	US	717.337.0198
000008	Gourmet Giftware	Cyndy	Sikes	DeForest	WI	53532	US	
000009	Utopian Cattle	Krista	Nugent	Albuquerque	NM	87109	US	505.773.2913
000010	Massage Land	Ms. Jane	Ghast	Marshfield	WI	54449	US	414.956.3332
000011	Rexall Drugs	Karen	Dennison	Albuquerque	NM	87111	US	505.273.7751
000012	Bing Bong Gift co	Rhonda	Frenchi	Albuquerque	NM	87112	US	505.299.3321
000013		Ernie	Augustine	Albuquerque	NM	87123	US	505.265.1563
000015	Misha Gifts	Amy	Alcott	Albuquerque	NM	87120	US	505.267.9971

Figure 6. The Customers Inquiry screen

A magnifying glass tool button and the salesperson name appear following the **Salesperson** field in the newly generated customer as shown below.



Barista automatically added this toolbar because the salesperson field defined a table validation against the salesperson table. When users interact with this form, they are constrained to existing records in the salesperson table. They can use the magnifying glass to query the salesperson table from this form.

These examples illustrate some commonly performed data-centric behaviors that Barista implements automatically to significantly speed up development of the application.

Barista includes a form editor that enables the developer to fine-tune the generated form, for example, to change the default single-column layout to two columns, shown in **Figures 7**.

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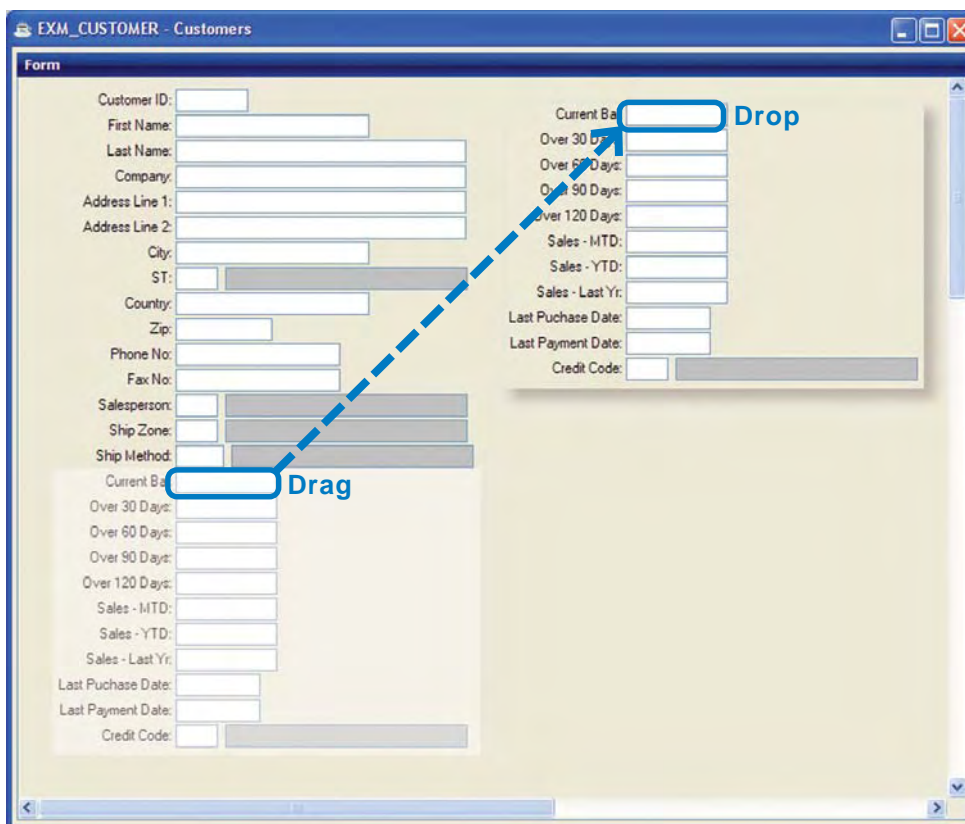


Figure 7. Dragging the **Current Bal** field to establish a second column

In addition to rearranging columns, developers can change the field sequence or add tabs and group headings, shown in **Figure 8**. These modifications can greatly improve the appearance and usability of the form.

It is easy to add a detail grid to display related information from another table, as shown in **Figure 9**.

Callpoints

Because of Barista's database capabilities and its graphical form designer, developers can essentially create and customize these forms without program code. However, there are times when a developer needs to add business-specific logic to the application. Whether it is performing advanced validation, executing auxiliary back-end programs, or starting a foreign application, callpoints provide appropriate places to run custom code. **Figure 10** shows the callpoint editor.

continued...

The screenshot shows a window titled "Customers" with a tabbed interface. The "Address" tab is active, showing fields for Customer ID (000010), First Name (Ms. Jane), Last Name (Ghast), Company (Massage Land), and Salesperson (BAR, Bartholomew Allen Reardon). Below the tabs are fields for Address Line 1 (1941 Wallace Avenue), Address Line 2, City (Marshfield), State (WI, Wisconsin), Country (US), Zip (54449-), Phone No. (414.956.3332), and Fax No. (414.956.3333). A "Shipping Info" section includes Ship Zone (08, Zone 08 (800 mi.)) and Ship Method (UPBLU, UPS Blue (2 day)).

Figure 8. Tabbed interface and group headings

The screenshot shows a window titled "Main Form" with fields for User ID (000006), User Name (Jim Dasel), Phone ((234)234-2342), a checked "Wants Spam" checkbox, and Email (jimdasel@mycomp.com). Below these fields is a detail grid with the following data:

Item Num	Description
000001	Prime
000002	50 pounds of chopstick
000007	Seventeen quickly formed sentences

At the bottom of the form are three buttons: "Sample Program", "Show Customer", and "Launch Notepad".

Figure 9. The detail grid displays other information related to the **User ID**

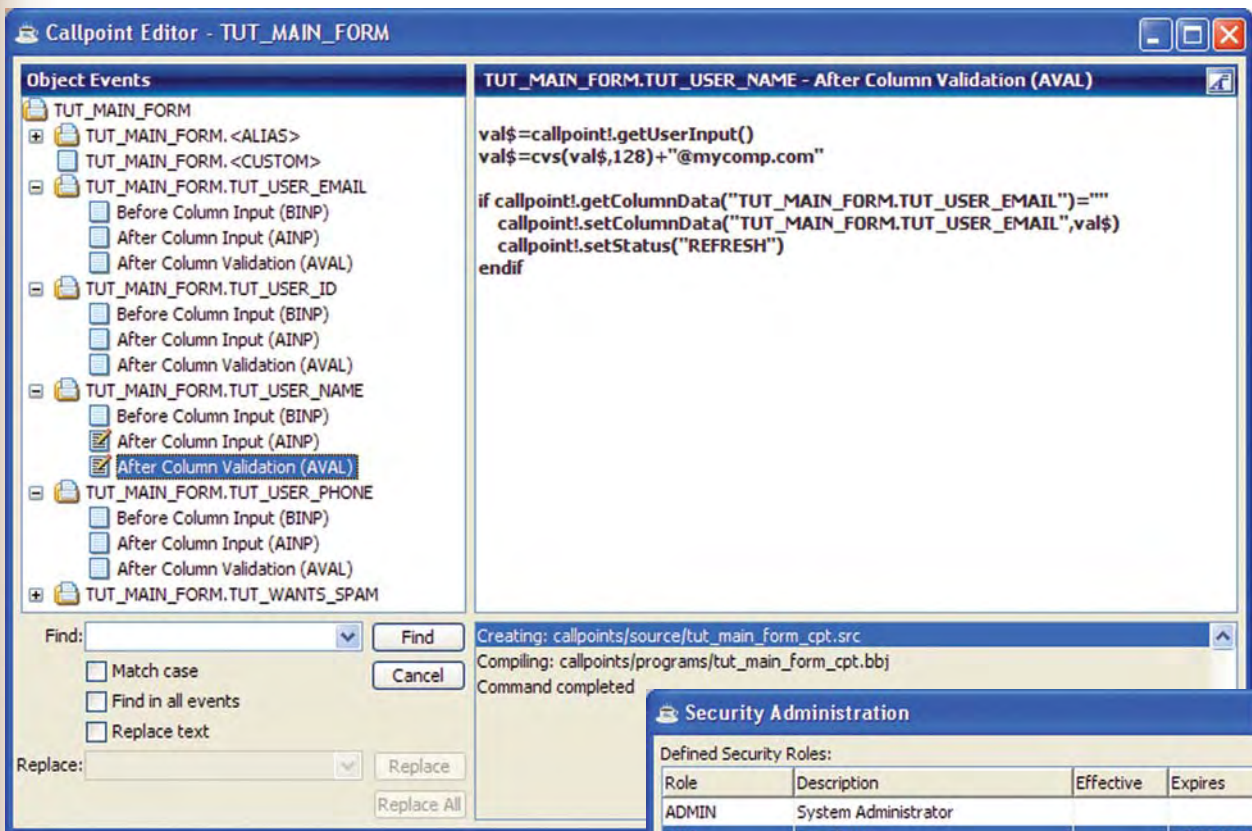



Figure 10. E-mail address automatically filled in based on the user name

Security

Barista supports a role-based security model, wherein it grants a user one or more roles. The administrator of an installation can fine-tune what permissions a given role has. This allows for quick granting and revocation of categories of access to individual users, as shown in Figure 11.

The Future

Since Barista handles much of the data display, access, and modification code, future versions of Barista will automatically update today's application with the newest features such as new GUI design standards, data lookup routines, or administrative utilities.

Barista is now appearing in the development build available for download from the BBj download page. It is an exciting product that will enable BASIS developers to build, maintain, and deploy modern GUI applications more quickly than ever before. 

To get started, see additional resources at www.basis.com/products/devtools/barista/documentation

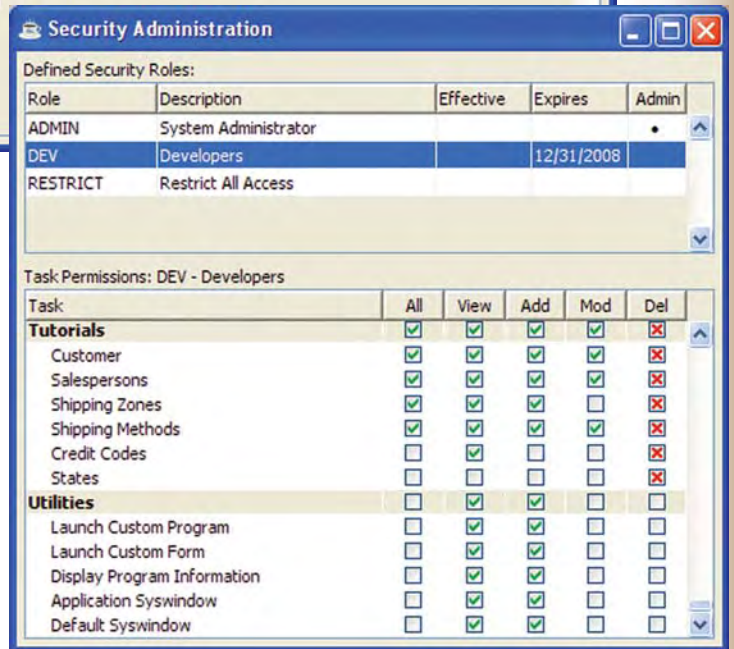


Figure 11. Setting permissions on a per role basis

Attend Barista training to learn just how rapidly you can turn your data and legacy business logic into new graphical applications.

Look for upcoming dates and register!

www.basis.com/training

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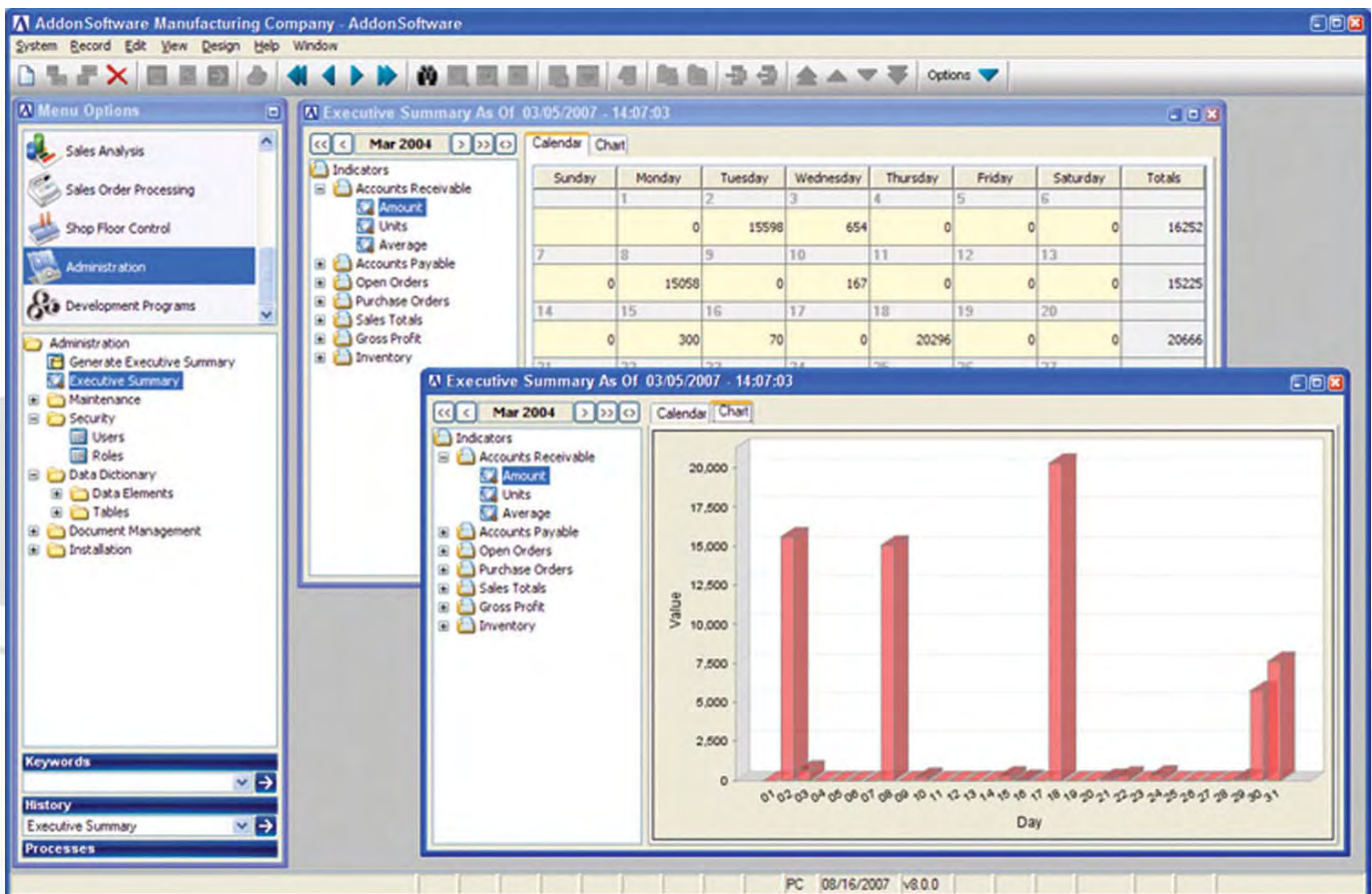
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