Please

Ask questions through the app

Rate Session

Thank you!

Plan to throw one away; you will, anyhow.

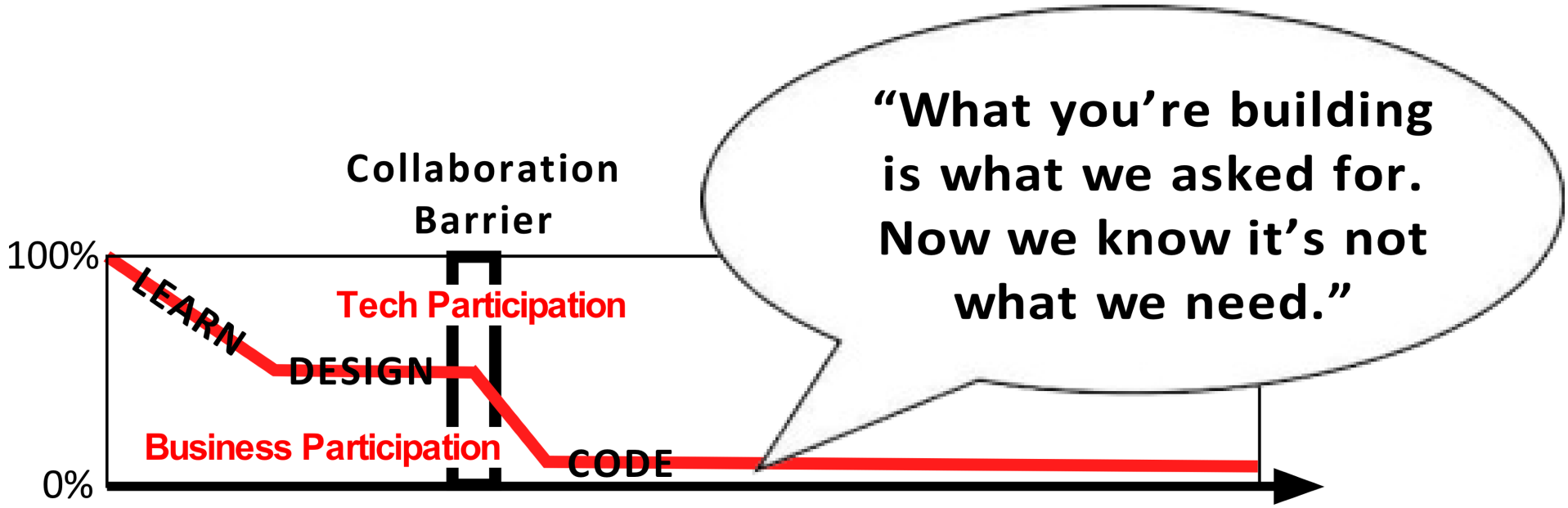
Frederick P. Brooks, Jr.
“The Mythical Man-Month”

Mary & Tom Poppendieck:

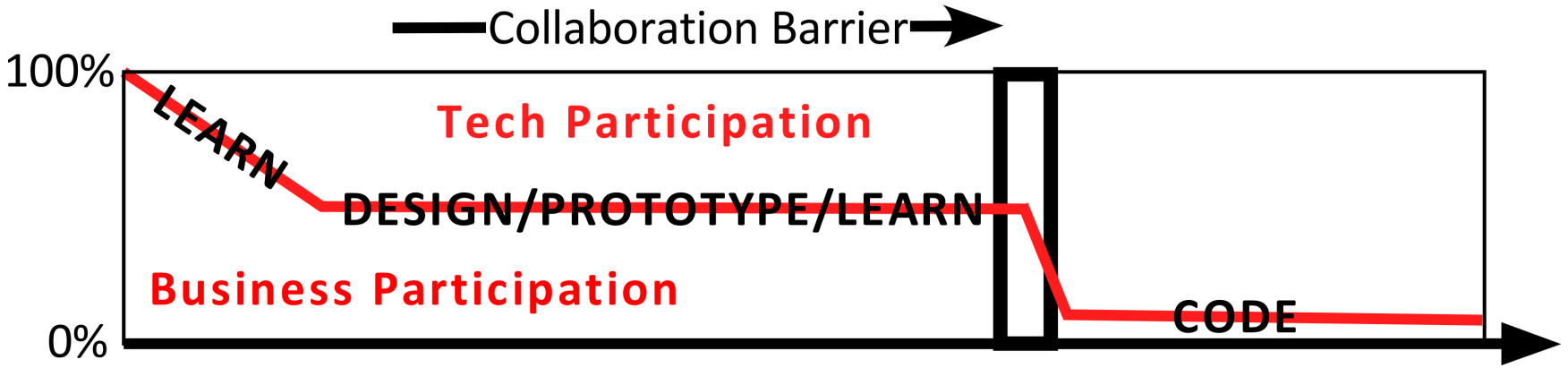
“The biggest cause of failure in software-intensive systems is not technical failure; it’s building the wrong thing.”

“Leading Lean Software Development: Results Are Not the Point”

Business Input Into What the Product Is Goes Way Down When Coding Begins



Prototyping Extends Participation of the Business People Into the Construction Phase of the Project



A Prototype is NOT … A Potemkin Village

Prototype:
An Early Implementation Whose Purpose is to Learn How Users Interact with the System

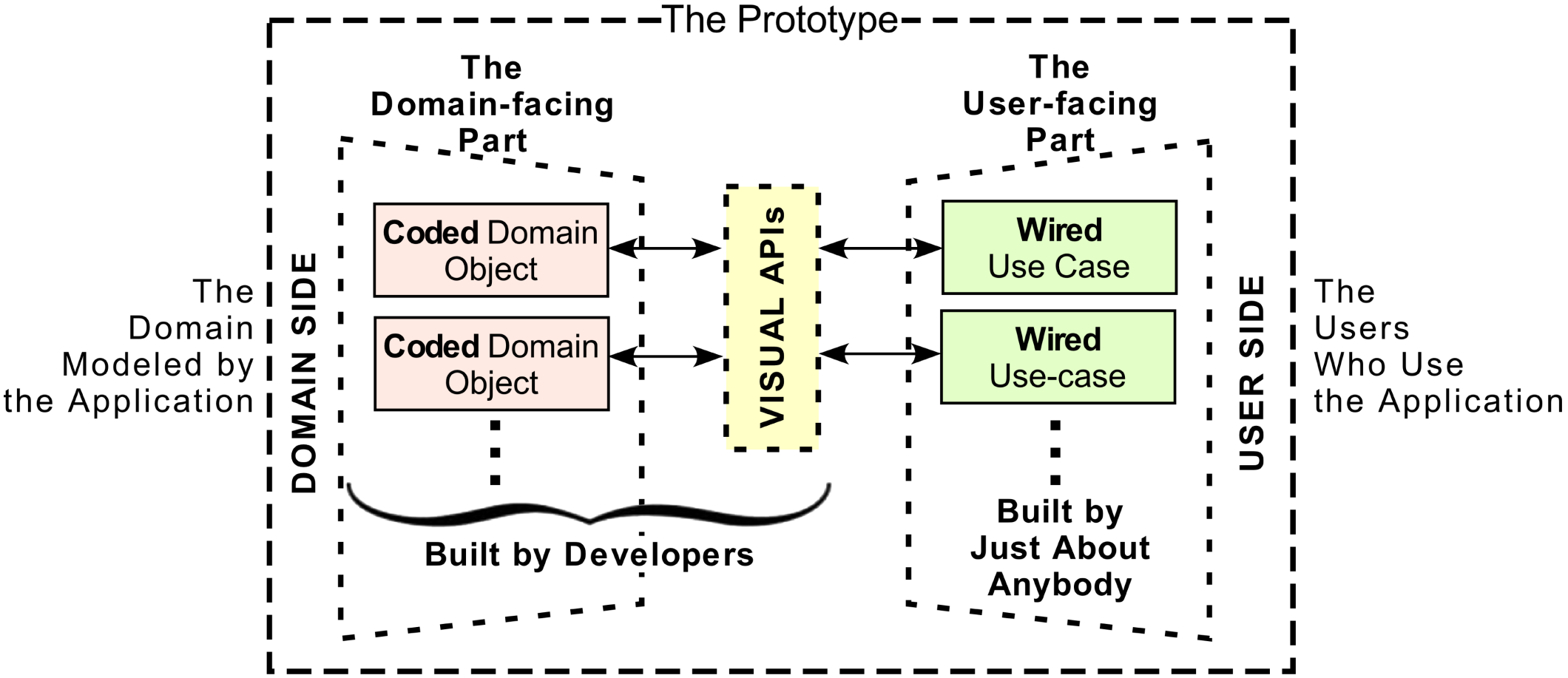
- It works as specified, but
- It doesn't necessarily take into account real deployment issues such as
  - Spatial distribution
  - Transaction rates
  - Security
  - Uptime requirements
  - Regulatory compliance
  - Latency
  - Response time to requirement change
  - etc. etc.

What You Will See

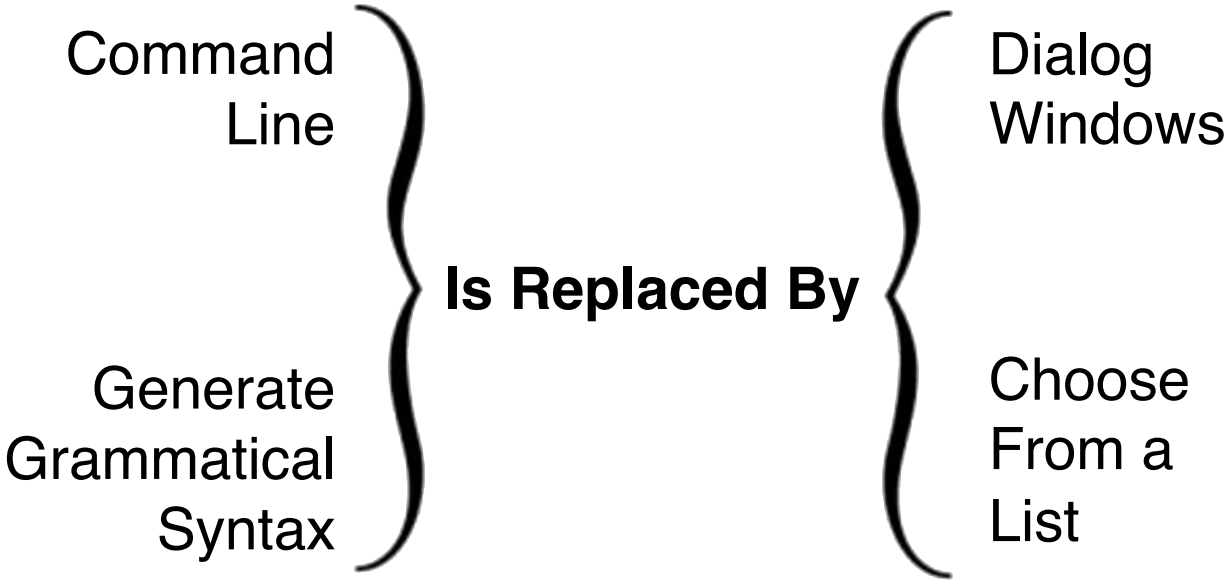
A way to ***divide up the work*** building a prototype so that…

- There is a parallel path for business people and developers to work concurrently on the prototype
- Business people focus on use cases while developers focus on domain objects
- Use cases are lightweight and flexible
- This gives the business people things to share with their colleagues

The "Two-faced" Prototype Model Cleanly Divides the Work



The Visual API

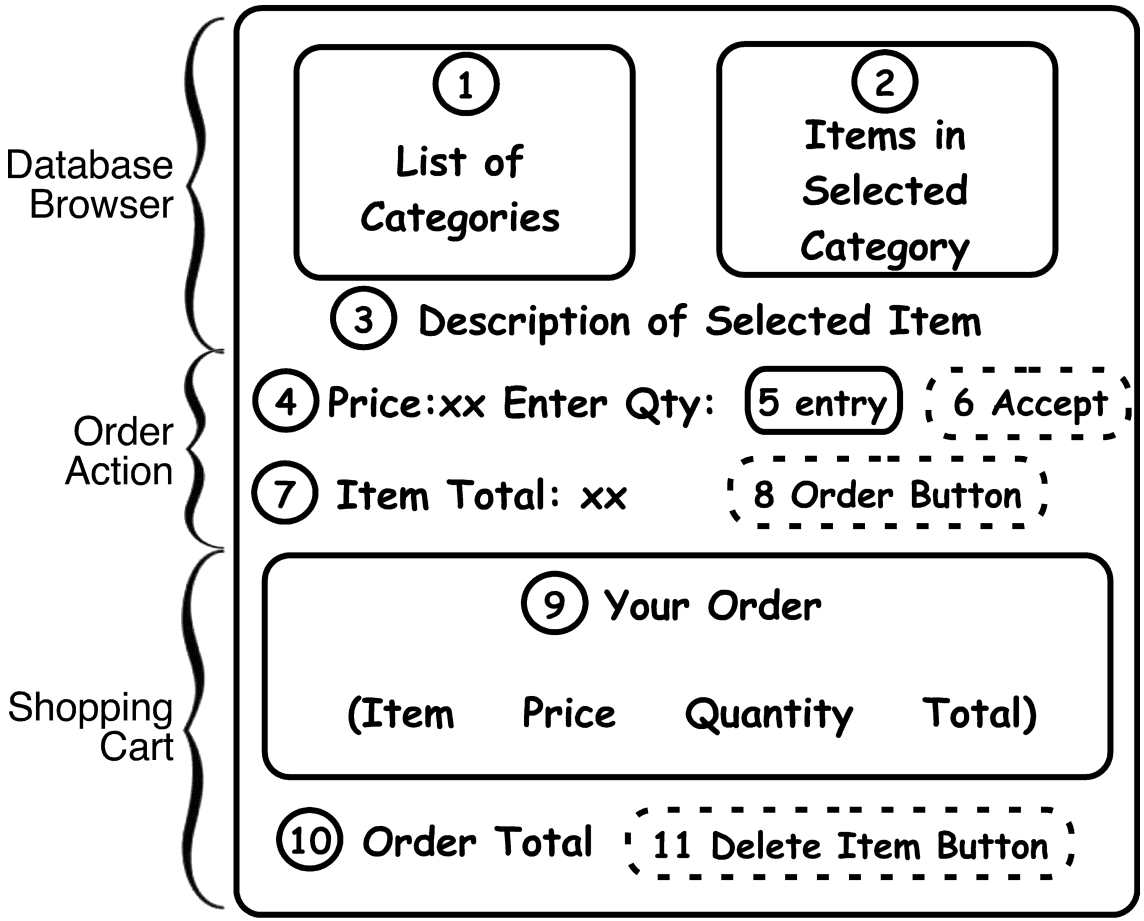


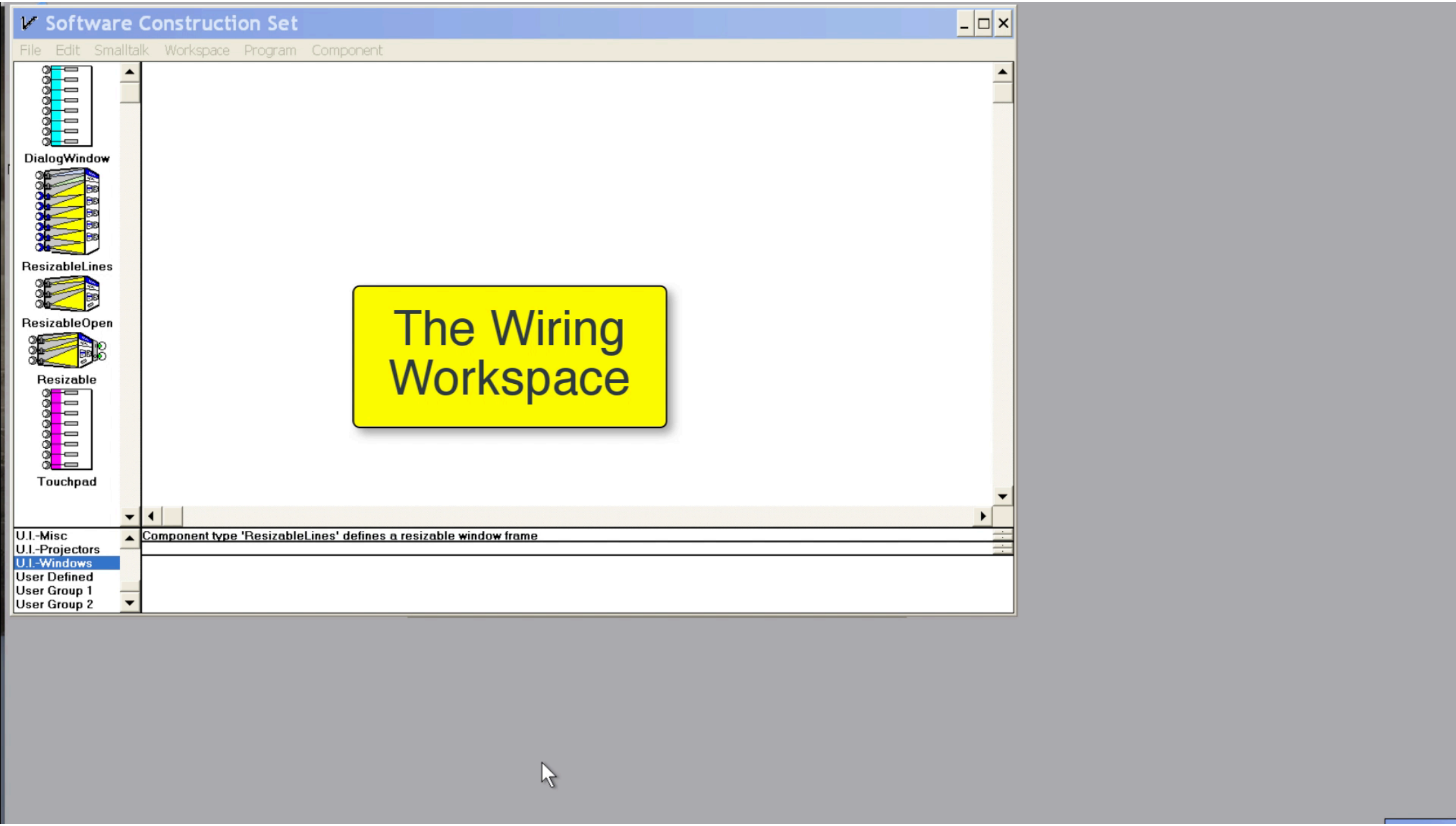
You will see:

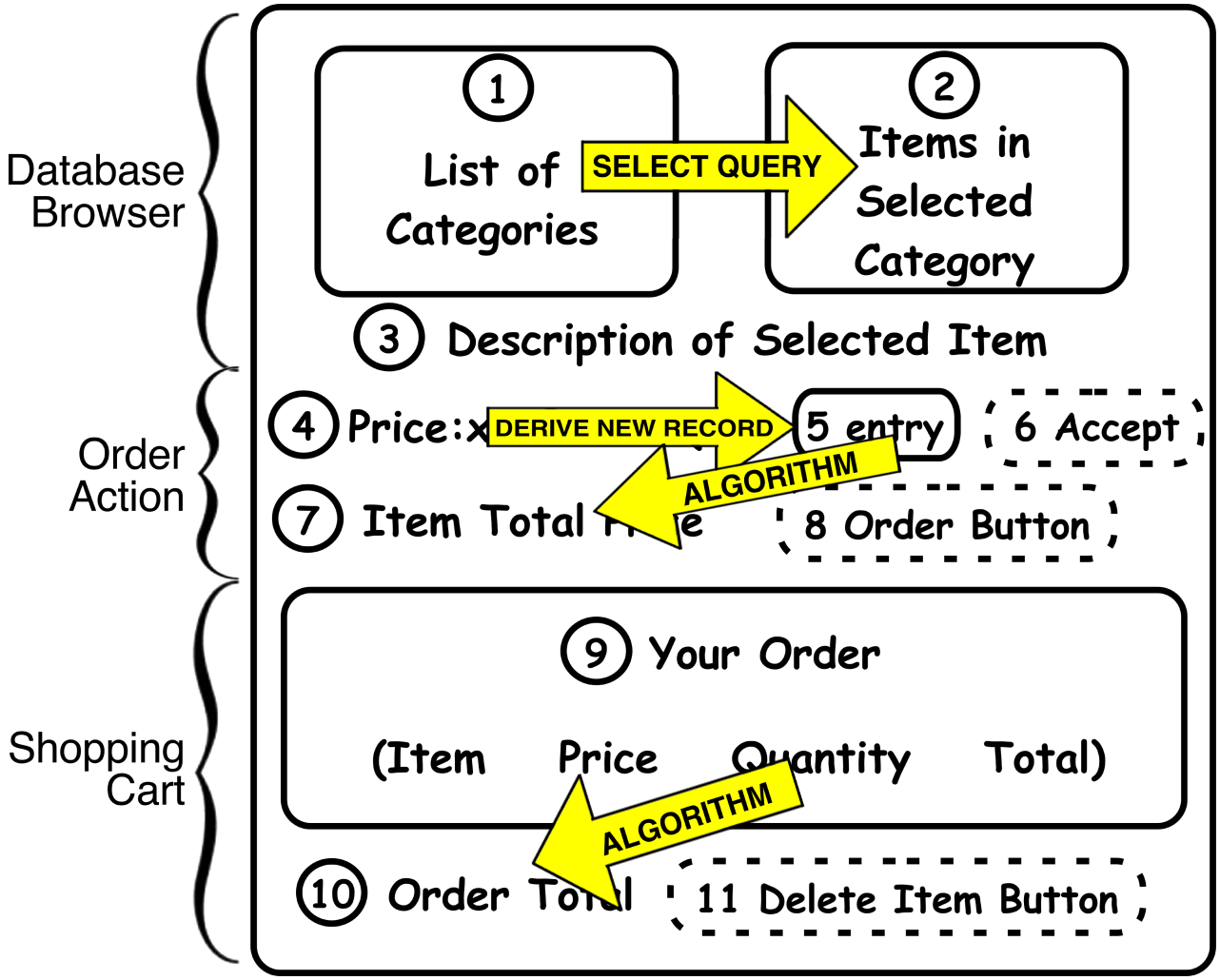
- **The Lightweight, Fluid, Experimental Style of Construction**
- **Data (In some form) is always present**

We'll Build a Prototype Starting With a Wireframe…

Italian Takeout Menu Application




Software Construction Set
File Edit Smalltalk Workspace Program Component
DialogWindow
ResizableLines
ResizableOpen
Resizable
Touchpad
The Wiring Workspace
U.I.-Misc
U.I.-Projectors
U.I.-Windows
User Defined
User Group 1
User Group 2
Component type 'ResizableLines' defines a resizable window frame

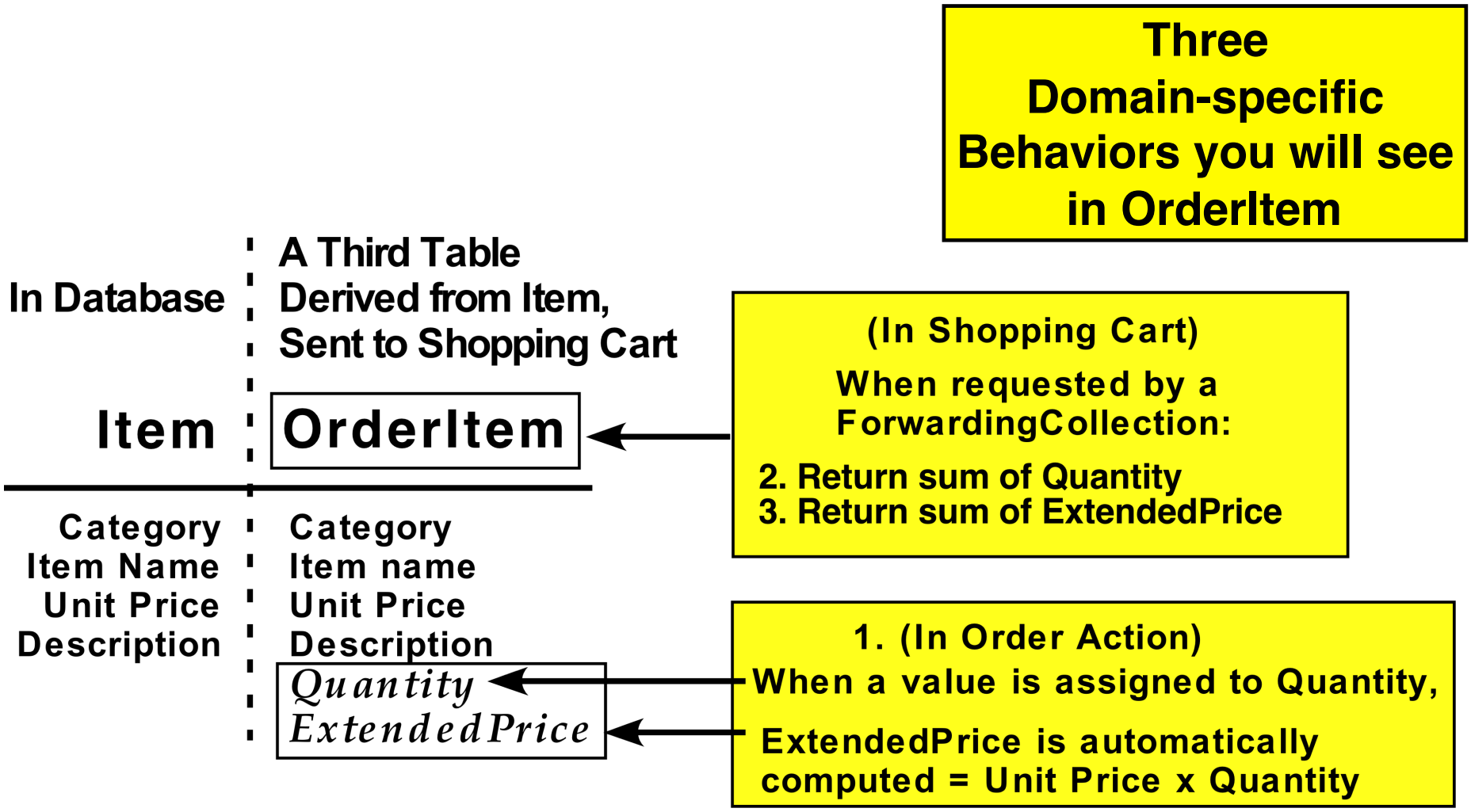


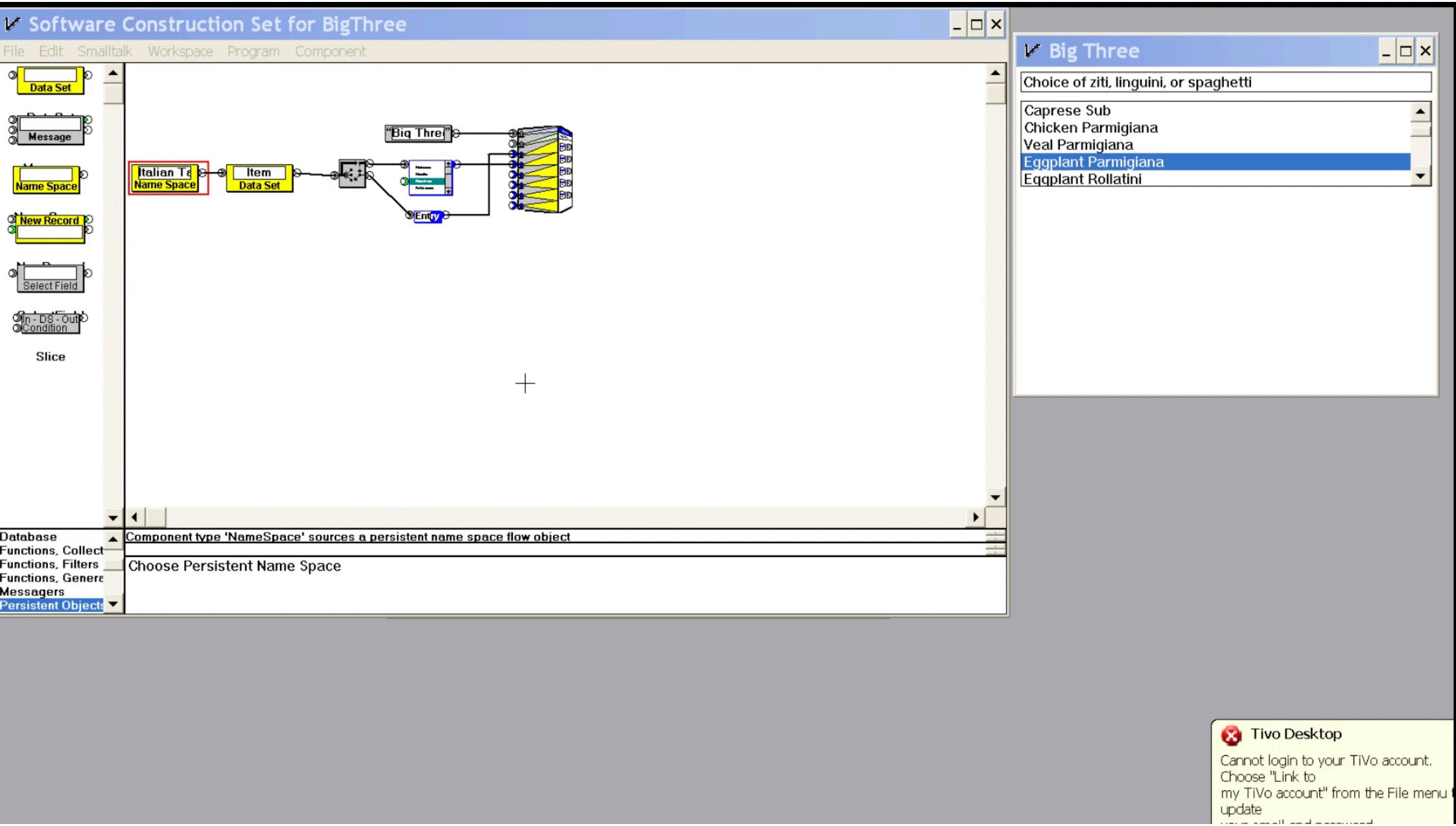
Yellow arrows show operations performed by domain objects, ***not in wiring***

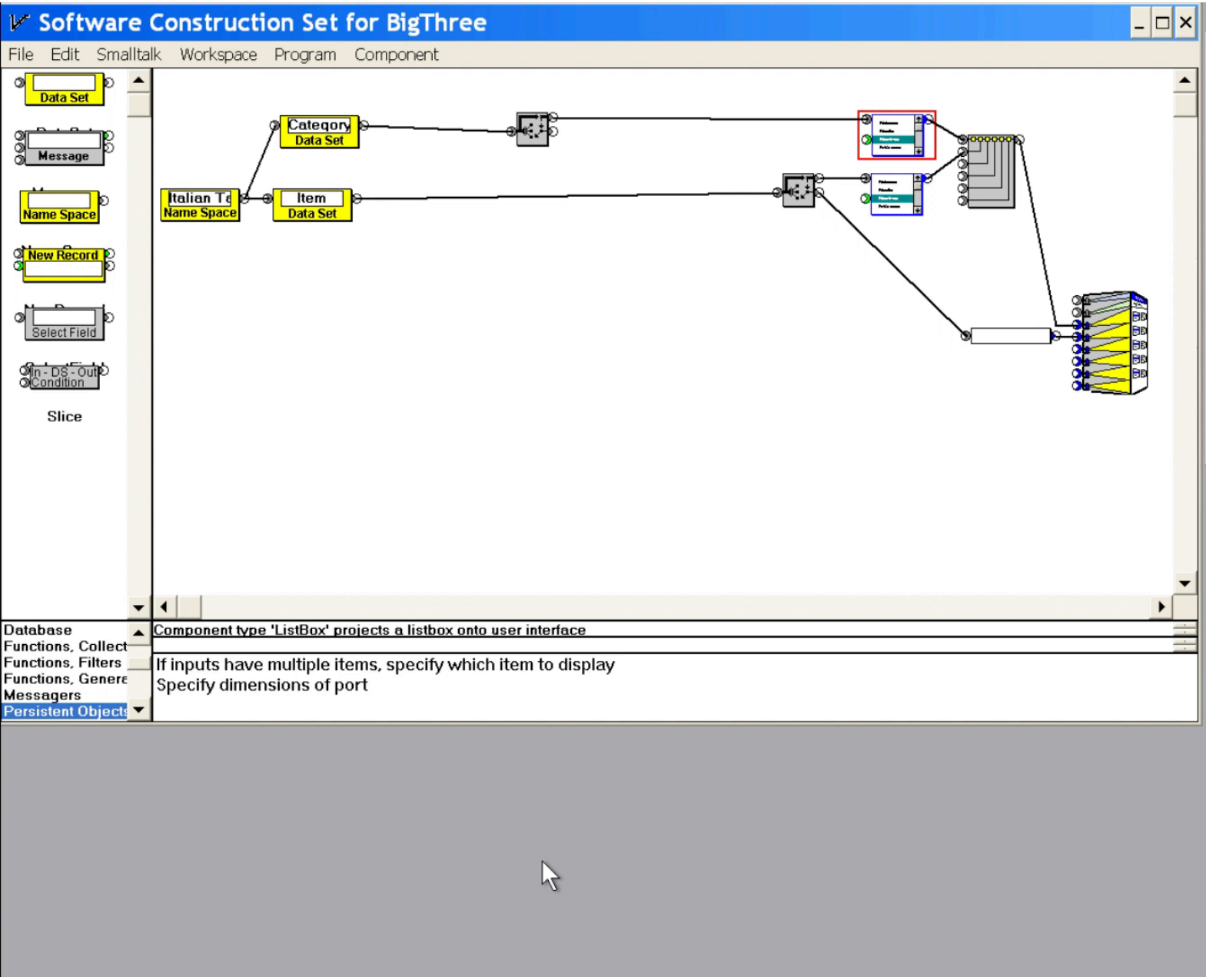
Category and **Item** Tables

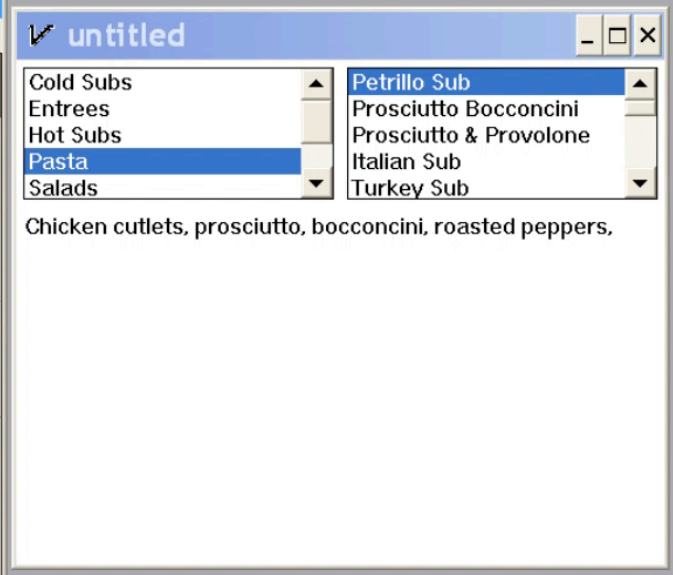
Name	Data_Type
Cold Subs	Category
Entrees	Category
Hot Subs	Category
Pasta	Category
Salads	Category
Wraps	Category

Category	Item	UnitPrice
Cold Subs	Petrillo Sub	8.95
Cold Subs	Prosciutto Bocconcini	7.95
Cold Subs	Prosciutto & Provolone	7.95
Cold Subs	Italian Sub	6.95
Cold Subs	Turkey Sub	6.95
Cold Subs	Italian Tuna Sub	7.95
Cold Subs	Mixed Tuna Sub	5.95
Cold Subs	Caprese Sub	5.95
Entrees	Chicken Parmigiana	8.95
Entrees	Veal Parmigiana	11.95
Entrees	Eggplant Parmigiana	7.95
Entrees	Eggplant Rollatini	8.95
Entrees	Pollo Piccata	10.95
Entrees	Chicken Caprese	10.95
Entrees	Pollo alla Linda	10.95
Entrees	Chicken Marsala	10.95
Entrees	Veal Marsala	12.95
Entrees	Marinated Steak Tips	12.95
Entrees	Chicken Saltimbocca	12.95
Entrees	Veal Saltimbocca	13.95
Entrees	Pasta Pomodoro	5.95
Hot Subs	Homemade Meatball Sub	5.95
Hot Subs	Veal Parmigiana Sub	8.95

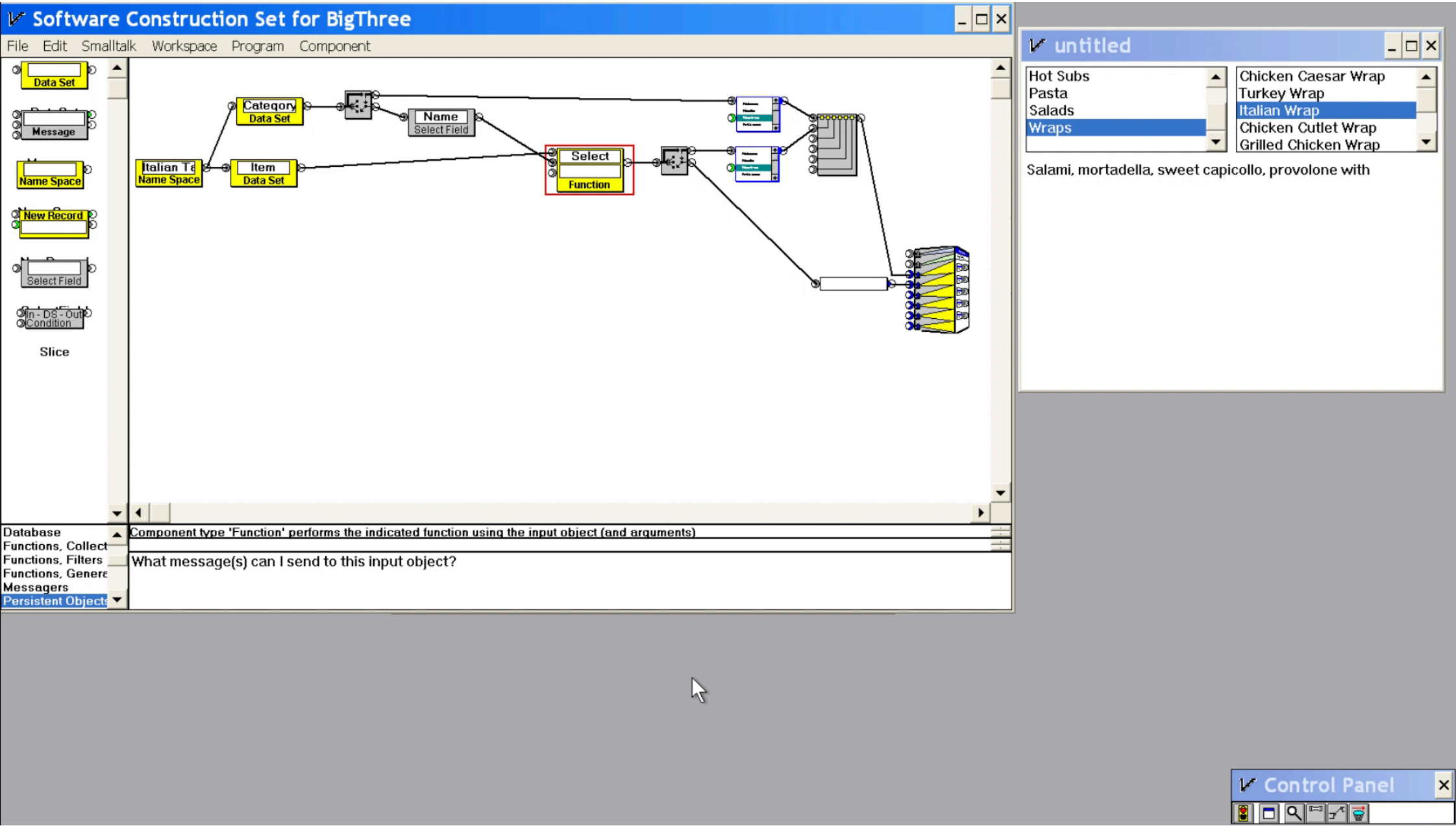

Three Domain-specific Behaviors you will see in OrderItem
In Database
A Third Table Derived from Item, Sent to Shopping Cart
Item
OrderItem
Category
Item Name
Unit Price
Description
Category
Item name
Unit Price
Description
Quantity
ExtendedPrice
(In Shopping Cart)
When requested by a ForwardingCollection:
2. Return sum of Quantity
3. Return sum of ExtendedPrice
1. (In Order Action)
When a value is assigned to Quantity,
ExtendedPrice is automatically computed = Unit Price x Quantity

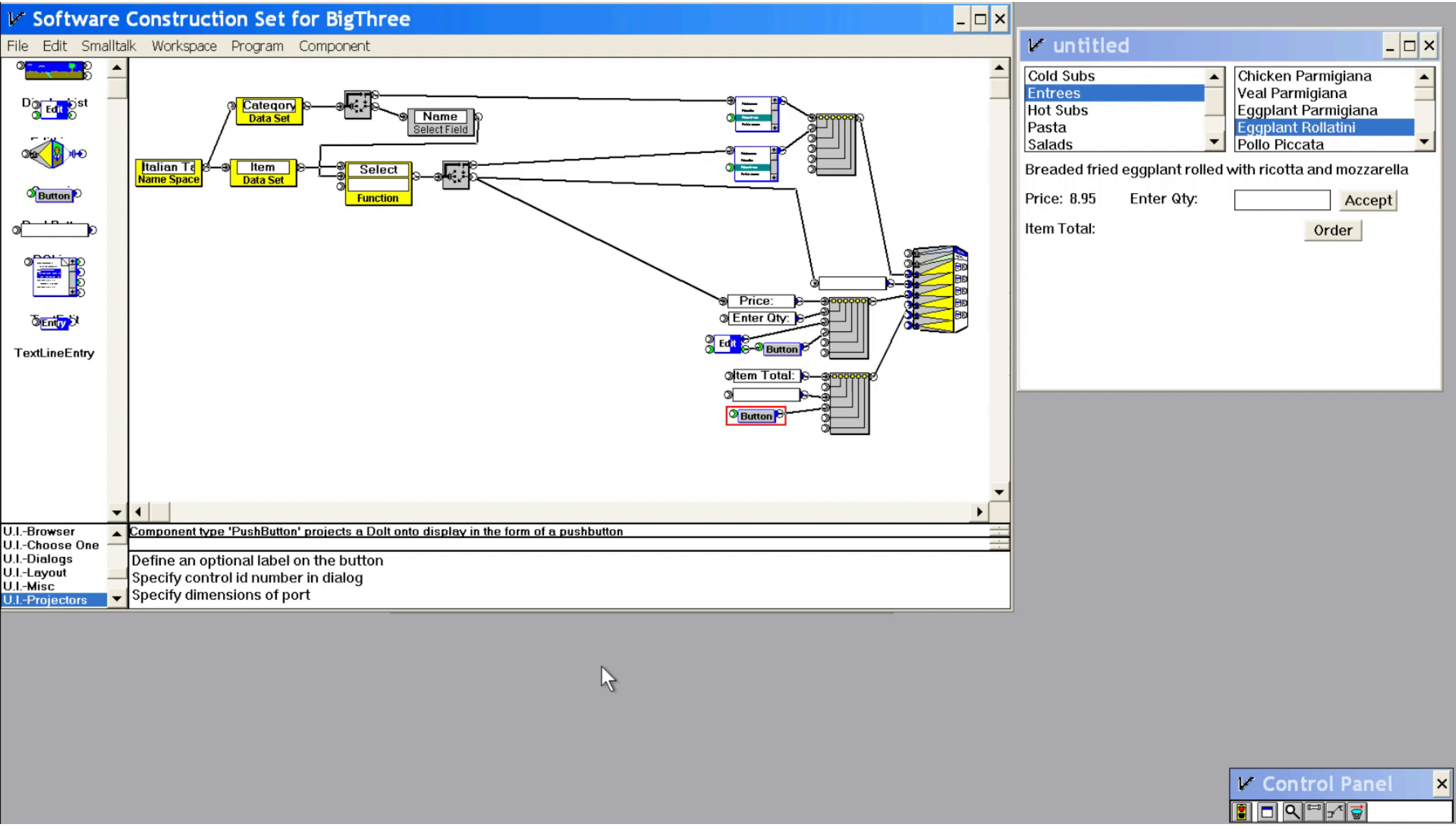

Software Construction Set for BigThree
File Edit Smalltalk Workspace Program Component
Data Set
Message
Name Space
New Record
Select Field
In - DS - Out Condition
Slice
Italian Ta
Name Space
Item
Data Set
"Big Three"
Entry
Database
Functions, Collect
Functions, Filters
Functions, Genere
Messagers
Persistent Objects
Component type 'NameSpace' sources a persistent name space flow object
Choose Persistent Name Space
Big Three
Choice of ziti, linguini, or spaghetti
Caprese Sub
Chicken Parmigiana
Veal Parmigiana
Eggplant Parmigiana
Eggplant Rollatini
Tivo Desktop
Cannot login to your TiVo account.
Choose "Link to
my TiVo account" from the File menu
update

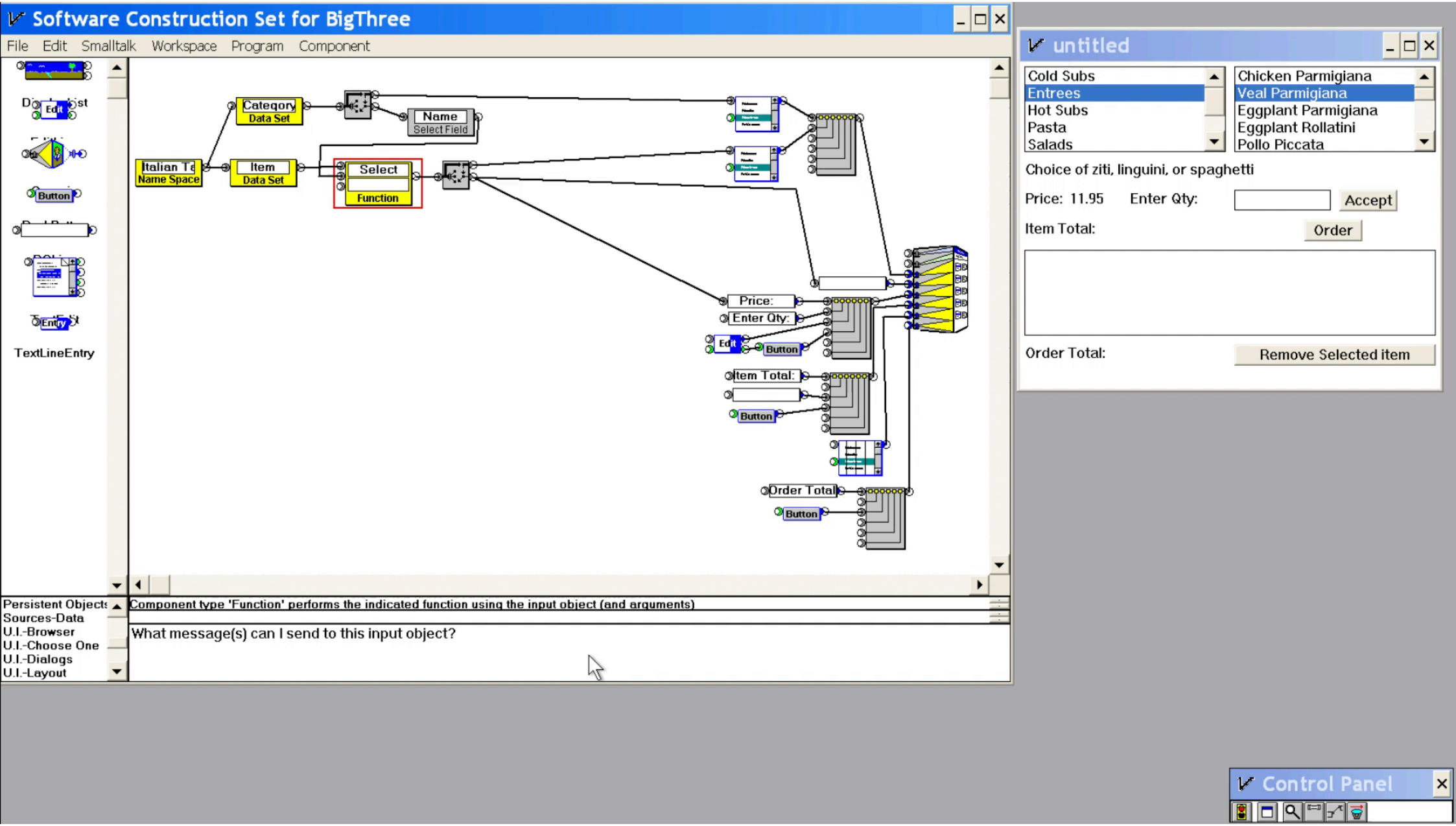

Software Construction Set for BigThree
File Edit Smalltalk Workspace Program Component
Data Set
Message
Name Space
New Record
Select Field
In - DS - Out
Condition
Slice
Category
Data Set
Item
Data Set
Database
Functions, Collect
Functions, Filters
Functions, Genere
Messagers
Persistent Objects
Component type 'ListBox' projects a listbox onto user interface
If inputs have multiple items, specify which item to display
Specify dimensions of port

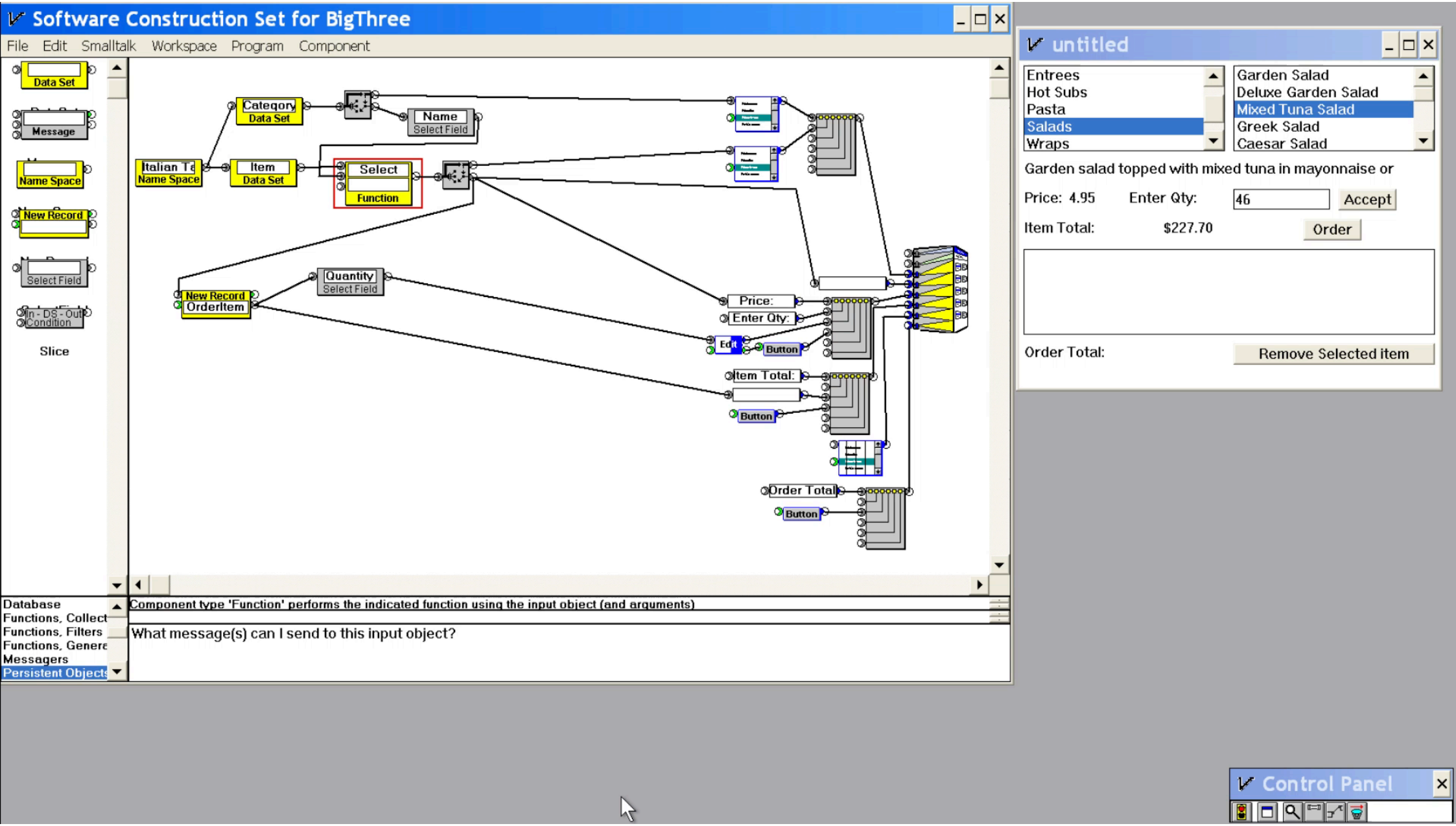

untitled
Cold Subs
Entrees
Hot Subs
Pasta
Salads
Petrillo Sub
Prosciutto Bocconcini
Prosciutto & Provolone
Italian Sub
Turkey Sub
Chicken cutlets, prosciutto, bocconcini, roasted peppers,

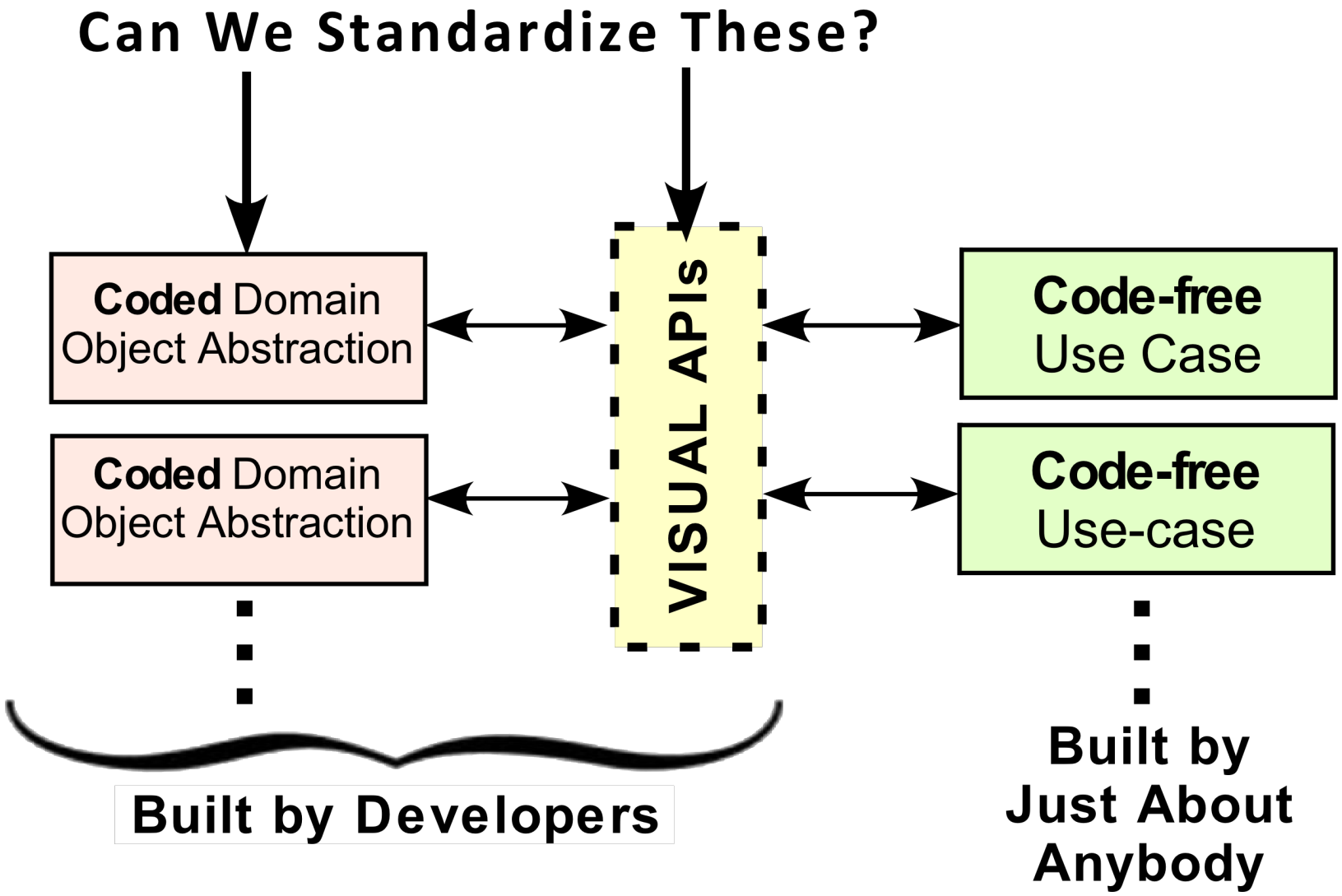
Control Panel


Software Construction Set for BigThree
File Edit Smalltalk Workspace Program Component
Data Set
Message
Name Space
New Record
Select Field
In - DS - Out
Condition
Slice
Category
Data Set
Name
Select Field
Italian T
Name Space
Item
Data Set
Select
Function
Database
Functions, Collect
Functions, Filters
Functions, Genera
Messagers
Persistent Objects
Component type 'Function' performs the indicated function using the input object (and arguments)
What message(s) can I send to this input object?
untitled
Hot Subs
Pasta
Salads
Wraps
Chicken Caesar Wrap
Turkey Wrap
Italian Wrap
Chicken Cutlet Wrap
Grilled Chicken Wrap
Salami, mortadella, sweet capicollo, provolone with
Control Panel


Software Construction Set for BigThree
File Edit Smalltalk Workspace Program Component
Edit
Button
TextLineEntry
Category
Data Set
Name
Select Field
Item
Data Set
Select
Function
Price:
Enter Qty:
Button
Item Total:
Button
U.I.-Browser
U.I.-Choose One
U.I.-Dialogs
U.I.-Layout
U.I.-Misc
U.I.-Projectors
Component type 'PushButton' projects a DoIt onto display in the form of a pushbutton
Define an optional label on the button
Specify control id number in dialog
Specify dimensions of port
untitled
Cold Subs
Entrees
Hot Subs
Pasta
Salads
Chicken Parmigiana
Veal Parmigiana
Eggplant Parmigiana
Eggplant Rollatini
Pollo Piccata
Breaded fried eggplant rolled with ricotta and mozzarella
Price: 8.95
Enter Qty:
Accept
Item Total:
Order
Control Panel


Software Construction Set for BigThree
File Edit Smalltalk Workspace Program Component
Button
TextLineEntry
Category
Data Set
Name
Select Field
Item
Data Set
Select
Function
Price:
Enter Qty:
Button
Item Total:
Button
Order Total
Button
Persistent Objects
Sources-Data
U.I.-Browser
U.I.-Choose One
U.I.-Dialogs
U.I.-Layout
Component type 'Function' performs the indicated function using the input object (and arguments)
What message(s) can I send to this input object?
untitled
Cold Subs
Entrees
Hot Subs
Pasta
Salads
Chicken Parmigiana
Veal Parmigiana
Eggplant Parmigiana
Eggplant Rollatini
Pollo Piccata
Choice of ziti, linguini, or spaghetti
Price: 11.95
Enter Qty:
Accept
Item Total:
Order
Order Total:
Remove Selected item
Control Panel


Software Construction Set for BigThree
File Edit Smalltalk Workspace Program Component
Data Set
Message
Name Space
New Record
Select Field
In - DS - Out
Condition
Slice
Category
Data Set
Name
Select Field
Item
Data Set
Select
Function
New Record
OrderItem
Quantity
Select Field
Price:
Enter Qty:
Edit
Button
Item Total:
Button
Order Total
Button
Database
Functions, Collect
Functions, Filters
Functions, Genere
Messagers
Persistent Objects
Component type 'Function' performs the indicated function using the input object (and arguments)
What message(s) can I send to this input object?
untitled
Entrees
Hot Subs
Pasta
Salads
Wraps
Garden Salad
Deluxe Garden Salad
Mixed Tuna Salad
Greek Salad
Caesar Salad
Garden salad topped with mixed tuna in mayonnaise or
Price: 4.95
Enter Qty:
46
Accept
Item Total:
$227.70
Order
Order Total:
Remove Selected item
Control Panel


Can We Standardize These?
Coded Domain Object Abstraction
Coded Domain Object Abstraction
VISUAL APIs
Code-free Use Case
Code-free Use-case
Built by Developers
Built by Just About Anybody

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