Visible Developer 4.1

Installation Instructions

This Title Page 1 will become the back side of the cover page.

You could use this page to describe the installation of the CD rom.

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Part 6 – Package and Deployment Guide – VB6 provides package and deployment instructions for VB6 users.

Part 7 – Visible Analyst to **Visible Developer** Interface explains how to export Schema Information from Visible Analyst to Visible Developer and how to export Clas

Rule Rule.Component.Object is Nothing
  Rule.Value is the current rule state (False initially).
  Rule.Outcome is the status message associated with the state ("" initially).

Event BeforeMethodExecuted
StateObj The method

(e.g., PO for the parent, PO.POItemCPC for the child)

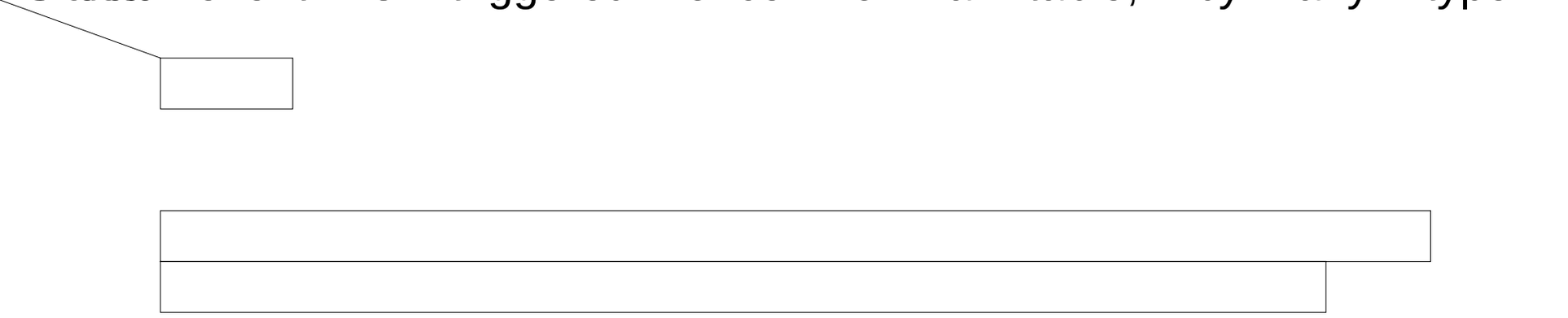
  For Add method: The row being added (e.g., POData.PORow for

  For Delete method: The row being deleted (e.g., POData.PORow

  For Update method: The row being updated (e.g.,

Fired By

RootList.Update, for each row to be inserted. (e.g., Pm0OtList.Updat method),



RowEditedComplete

form was generated.

2.41 Timeline: Property Update Child

inherit from is documented in the

Generating code in patterns

When developer runs a pattern its build method is executed. This method is provided by the base class calls the following members in sequence BuildInit, BuildBeforeComponents, BuildComponent (for each selected BO), BuildAfterComponents. Generally you would override the BuildInit, BuildBeforeComponents, BuildComponent and BuildAfterComponents to execute the

Changing the Operation of Forms

5

read before you make changes to generated code. Create a small

The Business Object

The business object is placed below the UI in the application

NOTE: Please ensure that the name of the UI layer project is unique on the web server and in the current Visual Studio .NET solution.

Select Build | .NET: ASPX | ASP.NET Combined to generate a new 3-tier application (with an ASP.NET UI Layer).

tables. When this option is selected only the first purchase order in the list is complete (all other records represent partial objects).

Description

File

New

SQL Server Stored Procedures.

VB6 - Components

6.2 Lesson 10 - Child Tables

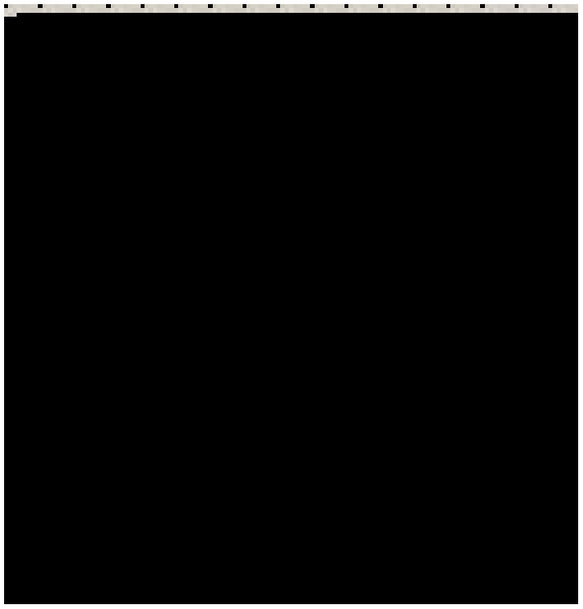
from the **Order Details** table.

In **Visible Developer**

In the **Orders** BO, right1.enuck

QuantityPerUnit is editable and visible because the category Beverages was chosen.

Create a new business object, **EmployeesNames** , using the



Double-click on the search button. Visual Studio will add a code

```
'Put the list in edit mode
```

6.19 Lesson 3 - Views

Views serve as both run-time and design-time objects. Why were

6.21 Lesson 5 - Relationships

6.22 Lesson 6 - List Detail Style Forms

In the Customer BO **List** view, select the fields CustomerID,

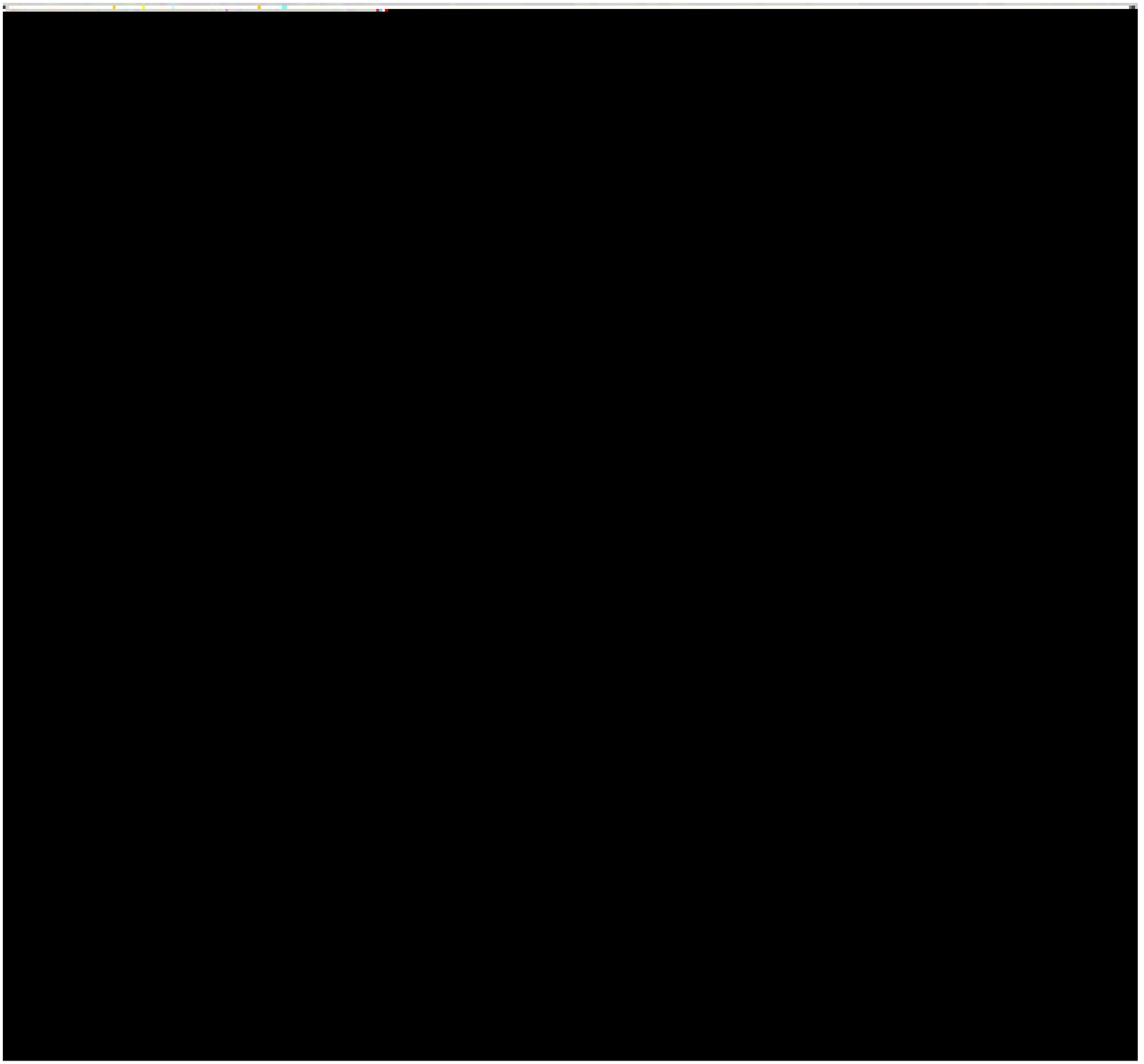
This is great as long as the table isn't too big. The list of suppliers, however, could potentially become quite large. In addition, if a

s… option, and then select the Component tab. 13. On the Co

8 Table Rule Tutorial

8.1 Lesson 1: Check out the Table Rule Tutorial Model and Schema

Check out the model



- Name = CalculateTotalAmount

```
'  Quantity field is missing
'  Unit Price field is missing
```

PaymentOption.NoRules.Stored.ValueObject =

·Dexter – Excellent credit rating, all payment options allowed

UpdatePaymentOptions:

Verify:

·Name = UpdatePaymentOptions

- Verify that the

·Dexter – Excellent credit rating, all payment options allowed

·Expand the Rules folder under the Company table in the schema tree view and double-click on

```
   if( RuleData.Event !=
VDURedist.MetaData.RuleEventType.BeforePropertyValueChange
d )
```

//StateData.Property objects in the current Business object.

·Definition = Members of the Shipping department can only modify the Status of a purchase order.

·Initial Value = False

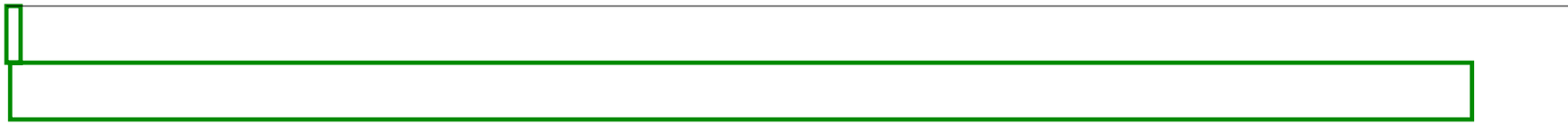
·Caption = Members of the Shipping department can only modify the Status of a purchase order.

·**Evaluate** Tab

With the

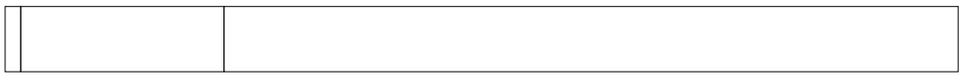
oVerify that the

- Initial Value = False



- **Parameters** : None

- **Returns** : Boolean



- **Syntax:** vBoolean = myBusObRules.ForeignKeyIsValid

- **Parameters** : None

- **Returns**

.

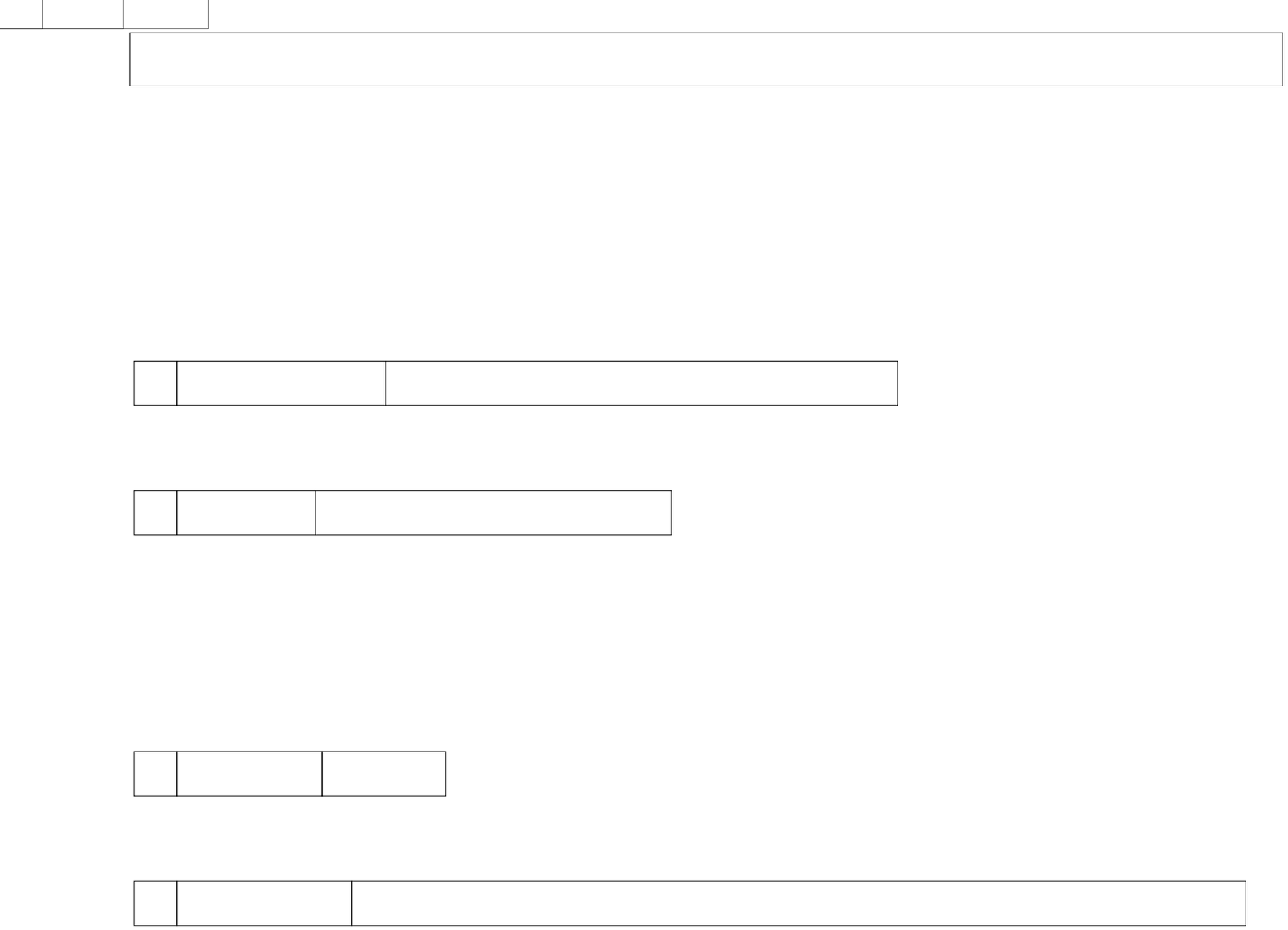
.

37424235 92 -96 re W n BT 1 0 0 1 0 0 T1/F3 83.000 Tf 0 Ts -13 83.0wQ q

triggered.

400

SaveEdits



- **Returns** : None

- **Remarks:**

- **Applies To** : All Logical classes.

- **Syntax** : myBusinessObject.Delete ()

- **Parameters** : None

- **Remarks** : Used by a UI object to delete an existing business

creates an instance of the child class.

Row Get

Row Get

MethodIsExecutable

.

PropertyIsViewable

- **Applies To:** All Logical business objects.

- **Syntax:**

business work is accomplished without an object created from a

In order to generate complex business objects, first select a

Visible Developer applications contain three design layers that are referred to throughout as:

- Meta Data

change a property value, change a property state, read information

```
    objRule.EvaluateWhen mtr_br_PropertyValueChanged,
"Number"



    'These methods cannot execute unless
CompanyMandatoryValuesExist is True.
```

Two rule property values are set before it is passed to the rule logilub:le

always create at least one message object when its value is False.

Severity and Description should always be provided. The others

If you provide values for the ProcedureName and ProcedureType, it makes it possible to retrieve messages from the MessageQueue

make up a business object frequently rely upon each other to

User-Defined Edit Points

Developers can create their own edit point by follr70 g -n B

Encapsulated DataSet to store the properties of the business object.
<BO>Data.<BO>DataTable

…
my<BO>.<Child>(4).<ChildPropertyName>.Value = 10

Any update or access of a property will only occur subject to the business rules associated to the object. Failure generates a message and optionally an exception that the UI can use to take appropriate action.

But there is more to Layer2 than just the rules. In Devos ac3e ar

UI tDork with a single set of values and nottDorry about the32

business object. A3 8f6ychform is dusd fby all lst form s to enabl

BeforeMethodExecuted

Mtr_bre_BeforePropertyValuechanged

RuleData.StateObj.BusObj.Meta.RootCollection

Business Object State

Bus
Business Object State

Logical business object classes in layer2 maintain a great deal of state information and make all of it availabl1r the UI. ct State

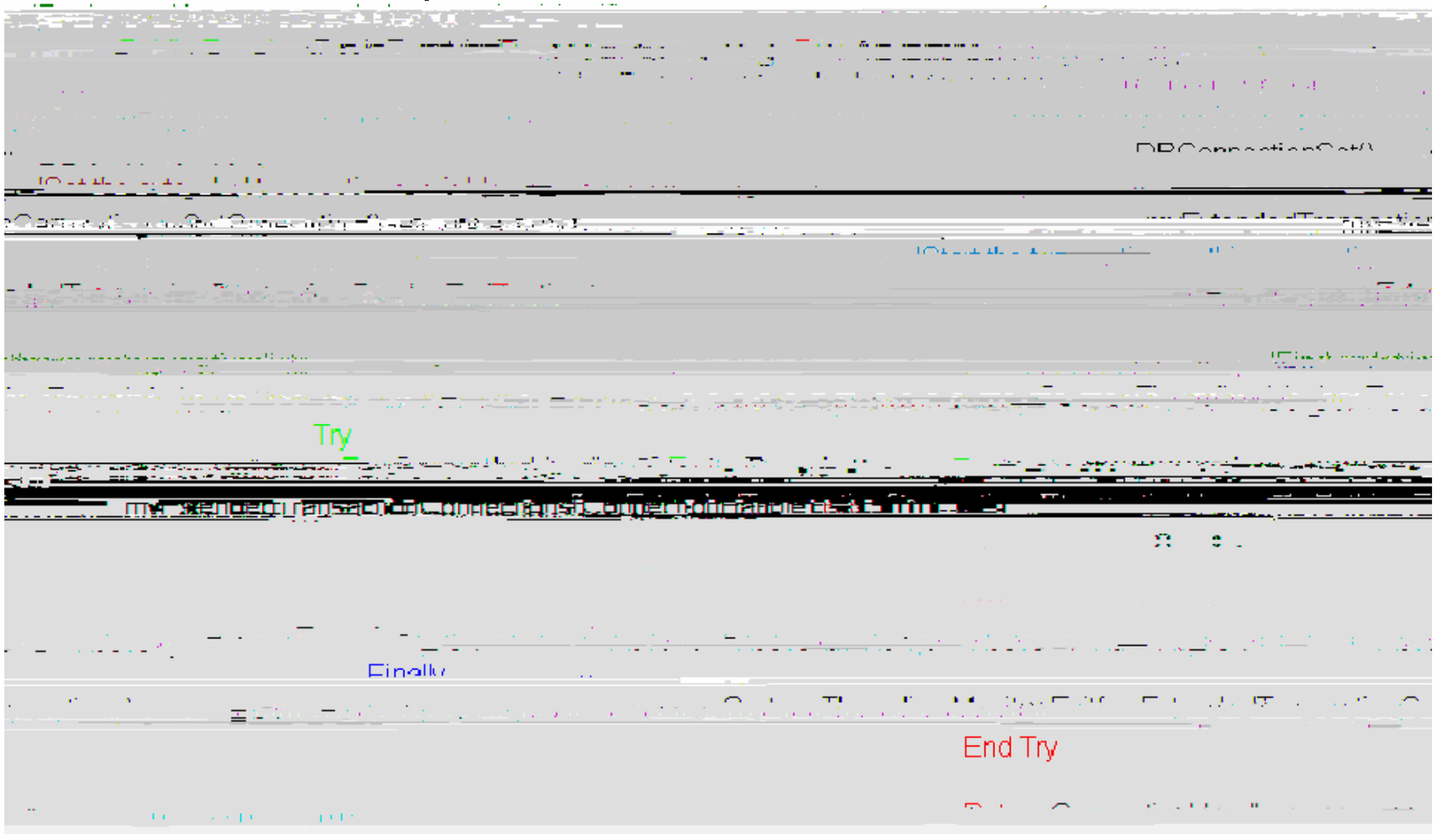
Ex: RuleData.StateObj.BusObj.RuleStateChanged = True

e.g. objMessage.Description = "An employee cannot supervise

properties.

Property
Description
BusObj
Business object this Rule is part of
 e.g. Dim BO As StateData.BusinessObject =
RuleData.Rule.BusObj
Meta
Underlying metadata object for this Rule

this particular transaction. The logic is also in place to accommodate multiple database connections if needed.



This routine will end the transaction and close any database connections that are open.

- Select the **Edit**

container are also selected.

Under the Schemas fo7eher thTutorialhe Sche node can be3

Use your preferred data modeling methodology and database

Note:

.

Select **View|Designers|Code Patterns** from the main menu to display the Code Patterns window.

.NET users:

· select

right in the list of tables to import. Or, click once and then click the ">" button. Youe3eiay also usehe li"> button. o immovandllh

Review Business Object Design

The

The **Search** tab lists properties permitted as search criteria.

The appearance and operation is similar to the other **Visible Developer** object viewers. A look-up table belongs to one and

only one table but a table can contain many look-up tables.

In the tree yL, clickIn thnodthnext to Tutorial Schema,In thnodts.

The CompanyCodeTable has the following design (you can view

oColumn Label: Type

oColumn Label: Parent Company

.

If a solution exists, remove it before continuing.

- Select File | Close Solution in Visual Stuido

taken in Lesson 1 for creating project references. (See Final steps .)

In Visual Studio.NET, start the application by selecting **Debug|Start.**

generation which is what we want to happen. As you run the new

- Displaying Search Results: The recordset returned by

bte3editRatingDependsOnStatus subroutine adp the e3ed. Be certa that you are overwriRatied. BeitR7 0 6Tehde betweend. Beind po

In the previous lesson, we did something slightly different. We

·Click

'Message could also be generated

Else

```
Set objRule = myBusObjState.AddRule("ValidCompanyName")
With objRule
```

Important Step (VB6 users) : When you are finished testing the

Note : Foreign keys are not identified using the Property Viewer form. 10 0pn0n474phe Propea ke f: Foreign you must create a

Now, make 82iAo./19B the FK Association:

· Click **Browse** , select **tutorial_with_changes.mdb** , and then click **Open** .

· Click the **Save** icon to save the changes.

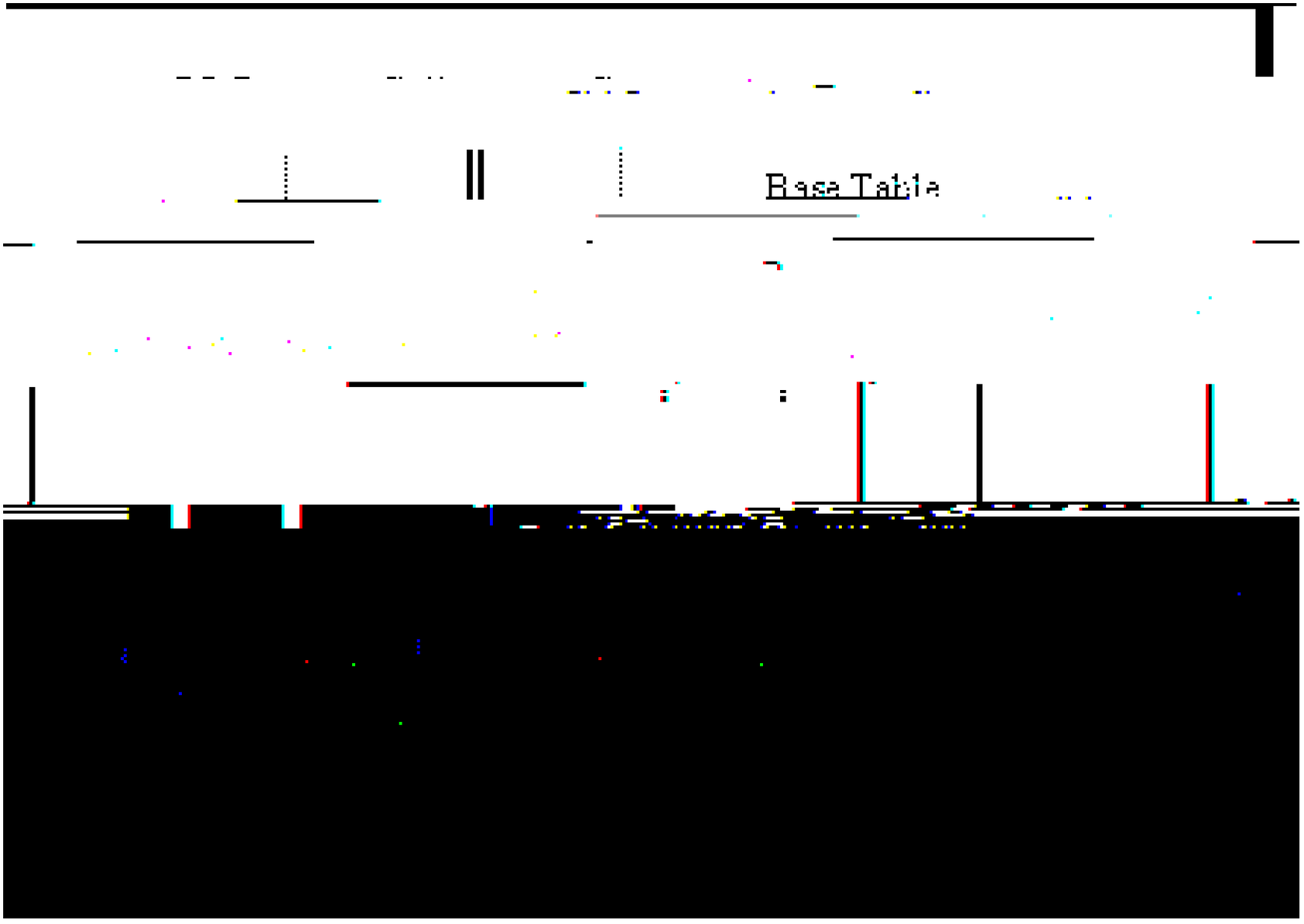
· Click the "**Synchronize DB** " button.

column labels" unchecked.

· **Black** colored tables signify matched tables that exist in the Visible Developer schema and the database.

.

·Select **Product**



The name of the root property collection is always the name of the

oQuantity

oDescription

Finally, modify the ItemsDetail view. It determines the appearance of the detail form used to edit an individual purchtiebder i It.ce

oer i).

We will change thdefault settings for PO properties before(3

·Select **PaymentTermId** for the Stored Field.

·Click the **Save** icon, then **Close.**

The PaymentOptions table design illustrates another common requirement for permitted values. Valid values for Payment_Method depend on the credit rating of the Company making the purchase. We cannot determine the permitted values

·Click **Close** and then **Yes** to confirm the save and return to the main **Visible Developer** window

Running the Application 1 0 0 Tm/F9cETQ q 977 9591 693 -96 re W

all mandatory fields have not been entered. (This exercise assumes the changes to PO properti nt11g4643 in aeenarlieres pic

Properties that are a foreign key or that are derived from a foreign

prompt form unless the Company business object was ametcy

oPriority = 1

oEvent: **After Method Executed**

Optional . If you want to learn how the UI uses business object

oClick **Add**

oPriority = 3

oEvent: **After Method Executed**

oName: **Read**

The strClassName parameter is a property collection

//(or VB class name) of the business object. Only properties in the specified
//property collection are retu -105 90 Tamei itefied

//1) It is a PHYSICAL view - table nam=d fieldble nam=re918

//When the business object exits it will test PermittedValuesChanged and if True
//it raises an event to notify the UI which can then update any controls that display
//permitted values. The Functions used to modify property values set this
//flag for us.

RuleData.Rule.Value = true;

Now run the application and test the new business rule. Create a new purchas 93r5mer CAfter nt ering a Prber, select these

oAdd and Update methods

.

·**Specification** Tab

oSet JoinID to

```
 InternalState.UpdatePropertyValues = true;

//See Edit Point: Items GenerateNewPK for the Key initialization
when new
 //rows are added.
```

Im/F3 83 myPO.Status.Value p o39

refo1 pe to. They can be found in: <Install Path>\Source Code.

Run the application. The first form displayed is UserDepartment. The selected option becomes the value of the

```
If CommonDefinitions.Department = "Shipping" Then

'User is in the Shipping department
'Set Value = False
                    RuleData.Rule.Value = False
                    RuleData.Rule.Outcome = "Purchase Orders cannot
be deleted by members of the shipping department."

'Add and Delete methods require this rule to be
'True.  Setting it False prohibits useds in the Shipping department
'to cuf 0 Ts TQ q 290 -565 238dify, orrs of t p
```

the operation; but at least one rule would fail and cause it not to be completed. In this form the mstrMode is set to the name of the method to execute when the form is Updated.

```
'Clear any existing criterion specified in Developer.
        View.SearchCriterion.Clear()
```

selected:

- Click **New** and make these changes:

- Name = Item_Number_IsSequential

·**Specification** Tab

In VB6 with the project explorer open:

- Click on PurchaseOrderDB in the solution explorer.

- Name: **Read**
- Click **Add**
- Priority = 2
- Event: **Class Initialized**
- Name: **PO**

·**Required By** Tab

- Click **Add**

1000

- Definition = Permitted payment methods must be updated whenever the customer is changed.

- Click

We will call this business rule: PO_Requires_1_Item. Add this new rule:

10381caTQ q ecthn.37 -94te4PO rule:0lecthn.3rule make1 0 se changes0 0

· Repeat for PurchaseOrderBR and PurchaseOrderDB projects. Replace existing files when prompted.

1060

Answer:

Answer:

Pattern_CustomL3Update.zip.

15.25 Equivalent of "has changes"?

Question:

After altering BOlist in memory (using add, update or delete) how do we reset the dirty flag and not commit the 1 0 0 90deaw

Resolution:

```
PublicReadOnlyProperty GetCurrentServerDateTime() As
DateTime
Get
Dim lDBConns As VDURedist.VDSQLConnectionList = Nothing
```

1110

'<<<Star

15.50

You can also call the stdUIRuleDisplay class to display the rule

define the view in the Developer schema as a table and use the view for the business object. The Developer schema table would

single name.

15.63

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