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### I. Report Master

#### A. *What is it?*

**Report Master** is a new report-writing tool accessed from inside Evolution. This tool is designed in part to simplify the development of Evolution reports. The user interface in Report Master is laid out in a much more organized way than that of Report Writer. For example, Report Writer has the Properties button that can be clicked after an object is selected to view that object's properties, all in an alphabetically ordered list. These properties still exist in Report Master, however they are displayed in a user-friendly way. As various components are added to the input form or print form, they can be right-clicked to view the object's properties. This displays a properties dialog separated into various tabs that show each category of properties.

Another purpose of the development of Report Master is to standardize the structure of our reports. Using Report Writer, there are several basic objects that are available for use in a report. Sometimes, a number of these basic objects are required to get the desired result. In Report Master, these basic objects are far fewer. This is because some of those objects have been put together into a new and more useful object. For example, Report Writer has an object called a subreport. This is no longer available in Report Master. Instead of adding a subreport, a subtable would be added. Report Master knows which objects can use subtables and will only allow a subtable to be added to one of those objects.

Our hope is that with the release of Report Master, the task of report-writing will become simple and structured enough to allow service bureau users to develop more custom reports without much or any programming experience. To assist users in this task, as new functionality is added to Report Master, that functionality will be documented, and that documentation will be made available to service bureaus.

### ***B. How does it work?***

In Report Master, there are two basic objects:

- **Containers**
- **Simple objects**

The **container** is the most basic object. Its name explains its purpose well. It contains things. Those things could be other containers or simple objects (text, table, database table, subtable, print image, etc). If a container is moved, anything inside of that container will be moved with the parent container, but will maintain the same relative location inside the container.

There are various types of **simple objects**. Each type has its own special properties allowing it to be customized differently than another type. A simple object is always located inside of a container. A simple object cannot contain any other objects.

When a report is first created, that report's print form has a single container inside. That container's size is determined by taking the paper size and shortening and narrowing it by the margin size. The paper size and margin size are found in the print form's Object Properties dialog, Page Setup tab.

As a report is being put together, it may include several objects, some of which may have objects inside of them. This can make navigation through the report's objects tedious. To assist the report developer with this, objects can be navigated through by using the escape <Esc> key on the keyboard. For example, if a simple table has been added to a report, the initial click into the table will set focus on a cell inside that table, not the parent table. Pressing the escape key will set focus on the container in which the previously selected object is contained, in this case the parent table. Once focus is set on the desired object, right-clicking anywhere in the print form or input form will display the available options for that object.

In Report Writer, it is necessary to declare variables for manual counting or summing in the appropriate event of the appropriate band. This is simplified in Report Master. A cell may be set up to show the result of an aggregate function whose variables are dependent on the value stored in another cell or container. Report Master will see this and automatically perform the aggregate function, compiling the list of values for use in the function prior to calculating the value to show in the report.

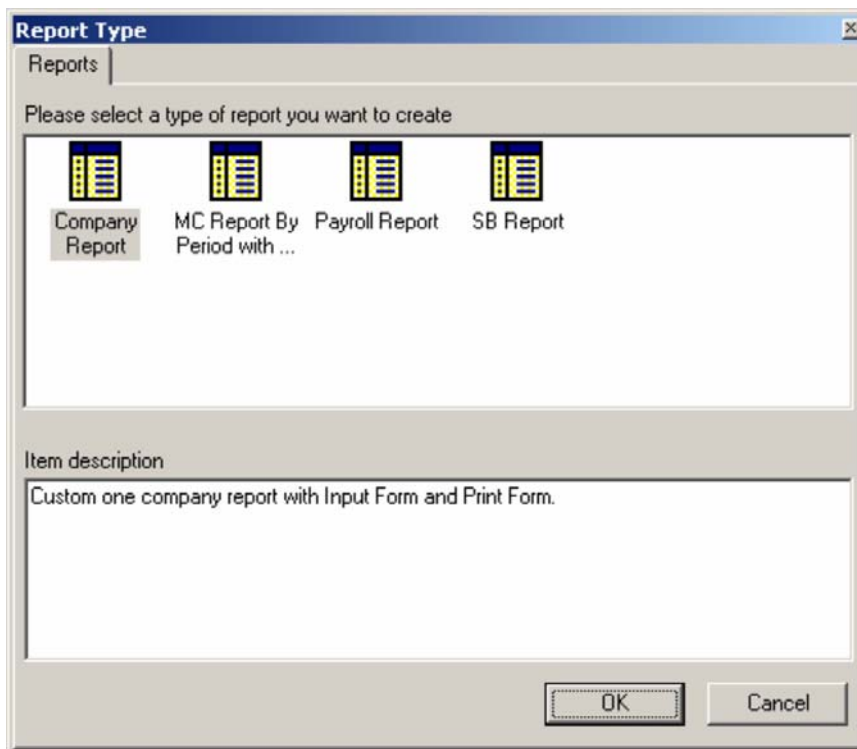
### C. Report Types

**Report types** exist for two reasons:

- To standardize the way in which each report is written so that they are more easily maintained and have a similar look and feel.
- To save time by not “reinventing the wheel.” Report types should provide the base on which to build each report.

By using a report as the base for each report, that report will receive any new functionality added to the report type in the future. There are times when reports need to be changed so that they work with Evolution in its current state. By basing a report on one of the available report types, that report will receive the required update when the update is made to the report type.

Each new report should be based on an existing ancestor, referred to as a **report type**. As there is need for different report types, they will be created and made available here. Each report type includes an input form and a print form. New controls may be added to both the input and print forms. Some currently existing controls may be modified on the input form.



## Evolution Report Master

Each report type is listed below, followed by a description.

### 1. SB Report

The **SB Report** type is the most simple report ancestor. This ancestor does not return any company or client data. It is useful when a report only needs to show service bureau or system information.

- The input form is empty.
- The print form includes the service bureau information page footer.

### 2. Company Report

The **Company Report** type is a single-company report ancestor.

- The input form includes an empty tab control.
- The print form includes the service bureau information page footer.

### 3. Payroll Report

The **Payroll Report** type is another single-company report ancestor, customized to be payroll-driven.

- The input form includes a tab control. The tab control includes one tab sheet with payroll selection parameters, and one tab sheet without any controls.
- The print form includes a payroll report page header and a service bureau information page footer.

### 4. Multi-Client Report by Period with Table

The **Multi-Client Report by Period with Table** type is a multi-company report ancestor.

- The input form includes a tab control. The tab control includes one tab sheet for company selection, and another one for period range selection.
- The print form includes a multi-company report for period page header, and a service bureau information page footer. It also includes a base table designed to loop through each company selected on the input form. In order to get company detail, a subtable should be added and detail defined there.

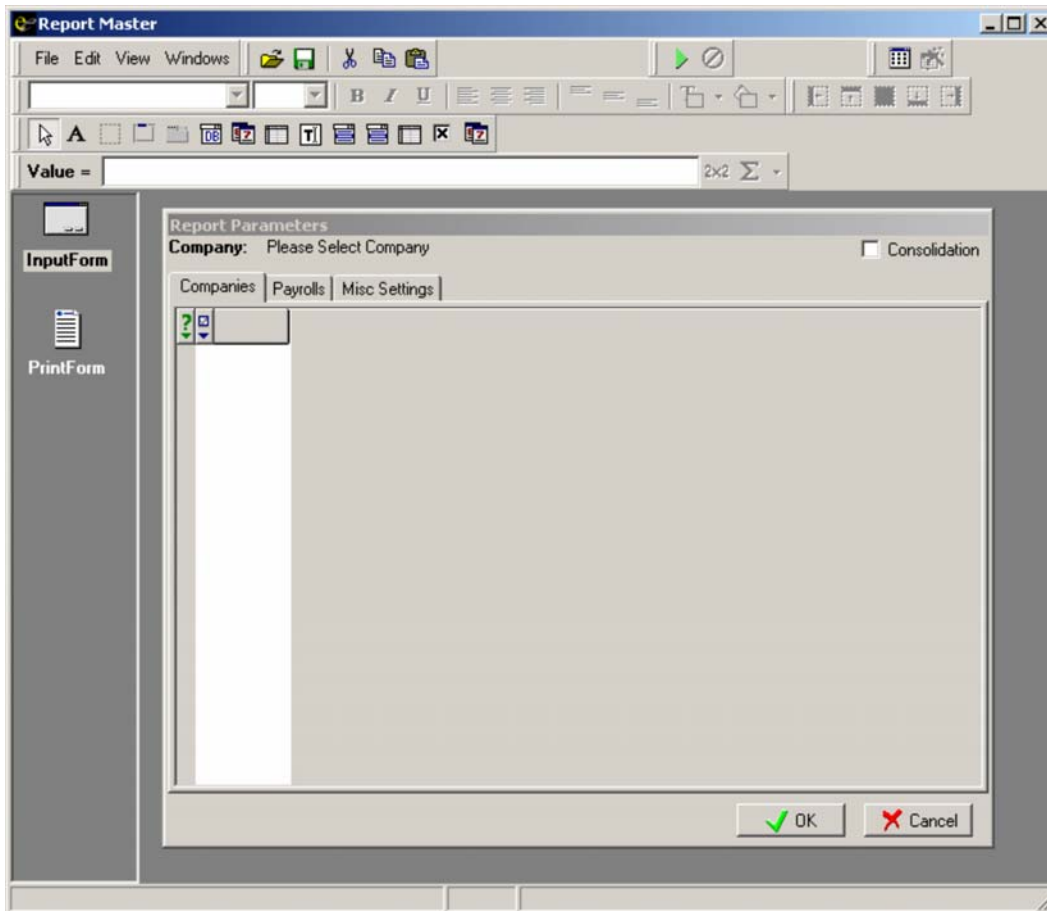
# Evolution Report Master

## D. Input Form

### 1. What is the Input Form

During development, the **input form** is where controls are added and modified to give the user the runtime options needed to limit the data being reported, as well as get all appropriate views of that data (show SSN or not, summary only, detail and summary, etc).

At runtime, the input form is the interface between the user and the report. This is where any user-defined parameters are entered for use in data selection, sorting, grouping and anything else that can possibly be defined by the user.

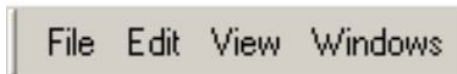


### 2. Input Form Buttons

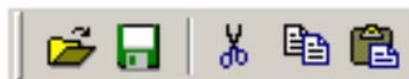
Several buttons are available at the top of the Report Master input form window. Those buttons can be divided into two categories:

- **Action buttons**
- **Object buttons**

The object buttons are reviewed in the Input Form Component Overview section. The action buttons are reviewed in this section, listed below:



- **File** – New report, open, save or exit
- **Edit** – Cut, copy, paste or delete
- **View** – Provides access to Expert Mode
- **Windows** – Toggle between open reports Close active report



- **Open from file** – Opens a report previously saved to a file
- **Save into file** – Saves the active report to a file
- **Cut** – Cuts selected text or object to clipboard
- **Copy** – Copies selected text or object to clipboard
- **Paste** – Pastes whatever was last cut or copied from the clipboard to the report



- **Run Report** – Runs active report
- **Terminate Running** – Terminates running of active report



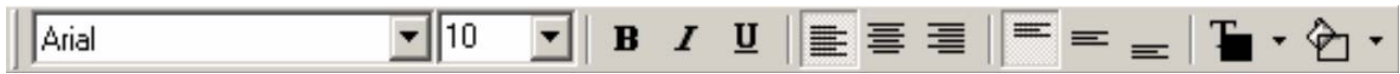
- **Set Default Report Parameters** – Run input form and select default input form parameters
- **Query Builder** – View Query Builder window



- **Value =** – Displays value or expression of selected object
- **2x2 (Formula Editor)** – Show Formula Editor for selected object
- **Σ (Add Aggregate Function)** – Quick insert aggregate function (sum or count) into selected object



## Evolution Report Master



All font buttons affect the text of the selected object.

- **Font Name** – Select font
- **Font Size** – Select font size
- **Bold** – Toggle emboldened font
- **Italic** – Toggle Italicized font
- **Underlined** – Toggle underlined font
- **Left Justify** – Print text as far left as possible
- **Center** – Print text in horizontal center
- **Right Justify** – Print text as far right as possible
- **Top Text Layout** – Print text as high as possible
- **Center Text Layout** – Print text in vertical center
- **Bottom Text Layout** – Print text as low as possible
- **Text Color** – Select color of text
- **Background Color** – Select color of background



- **Left Alignment** – Selected object is resized to the height of the parent object and moved so that the left boundary of the selected object is even with the left boundary of the parent object. Width does not change.
- **Top Alignment** – Selected object is resized to the width of the parent object and moved so that the top boundary of the selected object is even with the top boundary of the parent object. Height does not change.
- **Client Alignment** – Selected object is resized to the height and width of the parent object and moved so that the left, right, top and bottom boundaries of the selected object are even with the corresponding boundaries of the parent object.
- **Bottom Alignment** – Selected object is resized to the width of the parent object and moved so that the bottom boundary of the selected object is even with the bottom boundary of the parent object. Height does not change.
- **Right Alignment** – Selected object is resized to the height of the parent object and moved so that the right boundary of the selected object is even with the right boundary of the parent object. Width does not change.



- **Select Mode** – Changes mouse-pointer to select mode from object add mode.

### 3. Input Form Component Overview

**Components**, or objects, are used on the input form to give users the ability to define runtime parameters for reports. There are several of them, each with a specific purpose:



- **Label** – Static label
- **Container** – Object with the appearance of a panel that can contain other objects, like a set of check boxes or other related objects
- **Group Box** – Object with the appearance of a border or box that can contain other objects, much like the container
- **Tabs Control** – A set of containers that can each store different objects and brought into view by clicking on the appropriate tab
- **DB Combo Box with Query** – Dropdown that shows a list of items to select based on an embedded query
- **Date and Time Combo Box** – Date dropdown and time text box in one component
- **DB Grid with Query** – Grid that shows a list of items to select based on an embedded query
- **Text Edit Box** – Basic text box
- **Combo Box** – Dropdown with static values
- **Field Value** – Dropdown with valid values for selected table and field
- **Field Values** – Grid with valid values for selected table and field
- **Check Box** – Box that can either be checked or unchecked
- **Date Range with Quarters** – Period selection object including year dropdown, individual quarter check boxes and from and to date dropdowns

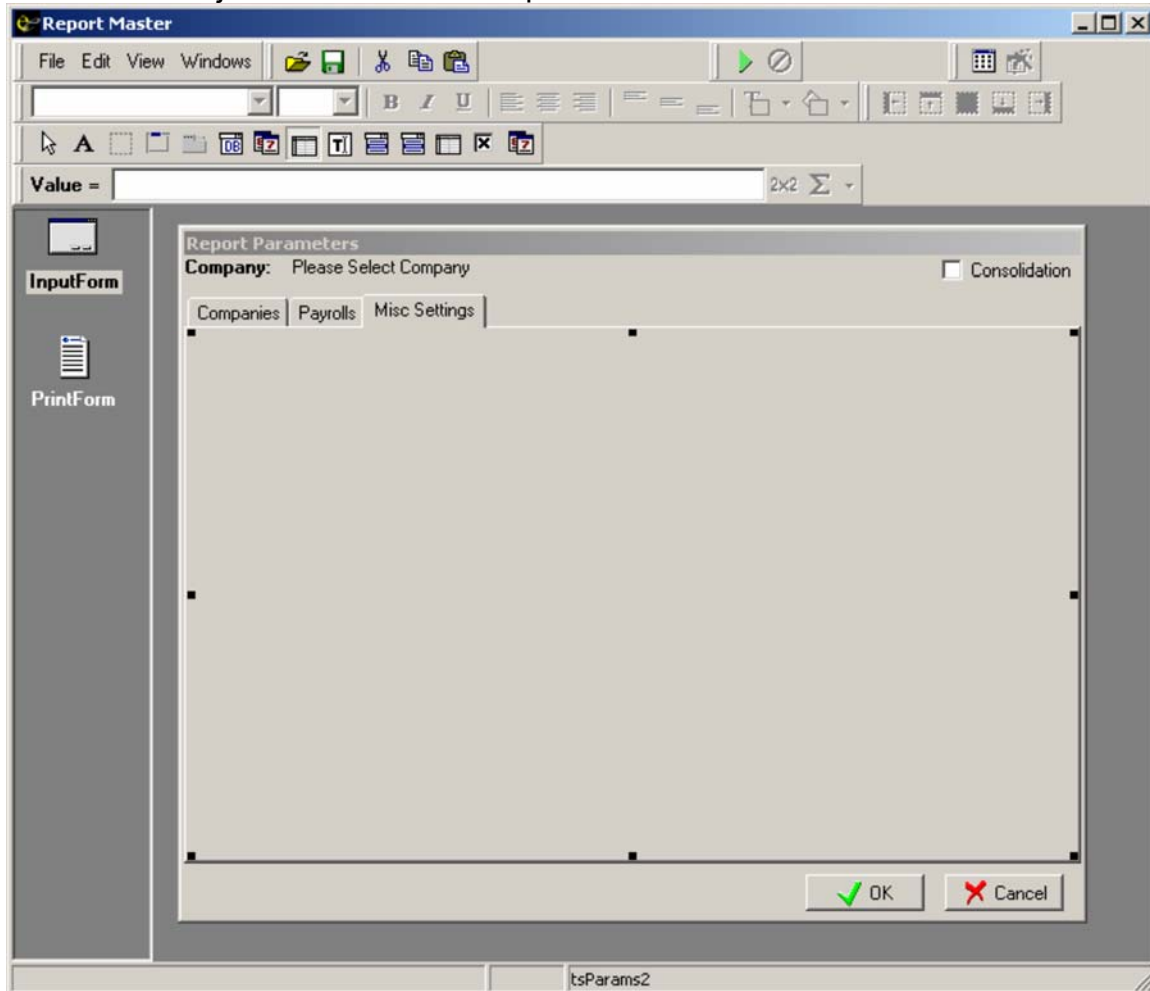
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### a) Adding Custom Controls

Depending on which report type is selected when a new report is created, some input form controls may have been inherited from that report type ancestor. Those controls are part of the input form and cannot be removed. Controls may be added, and some existing controls may be modified.

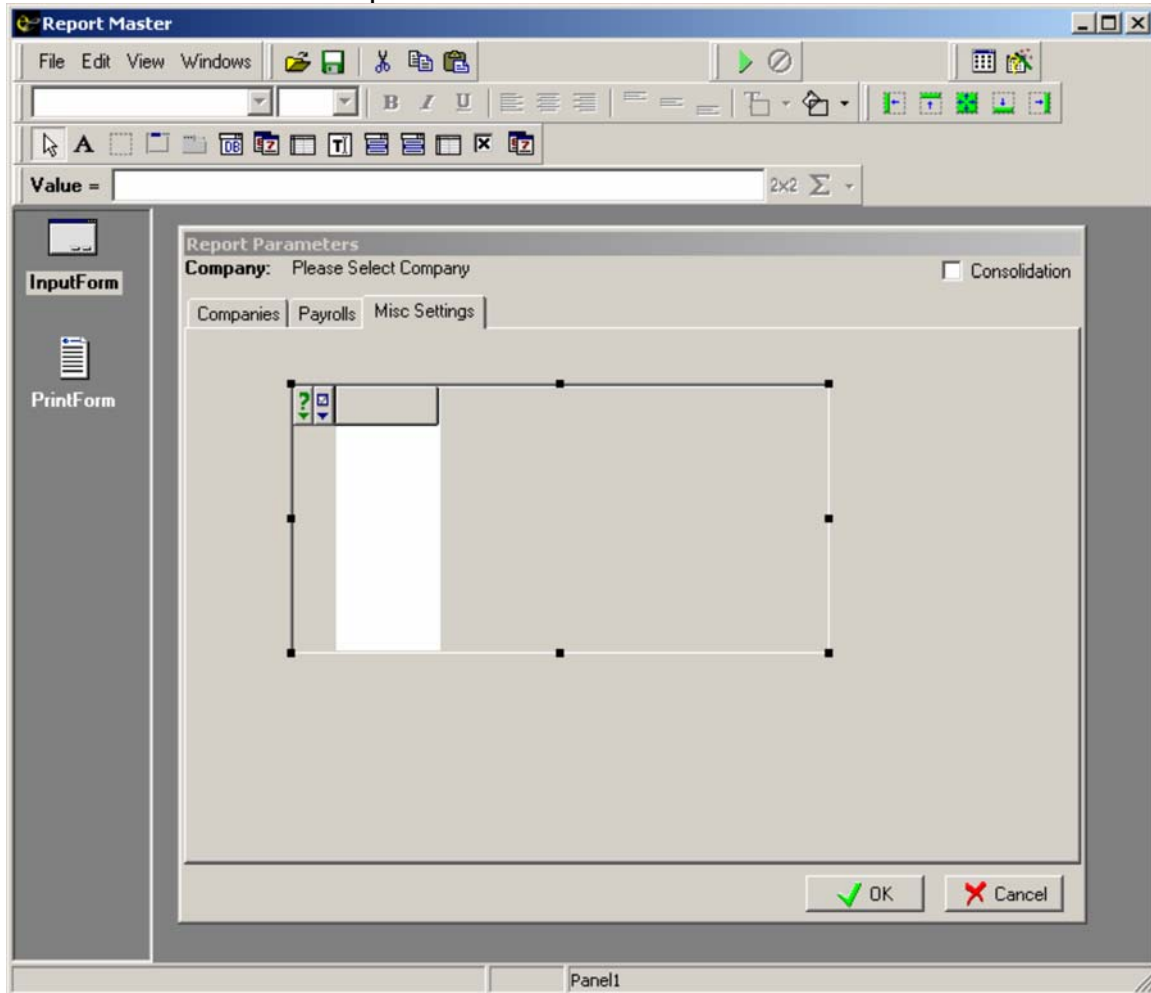
To add a new control to the input form, take the following steps:

- Click on the object button that corresponds with the control to be added.



## Evolution Report Master

- Click on the area of the input form where the control is to be located.

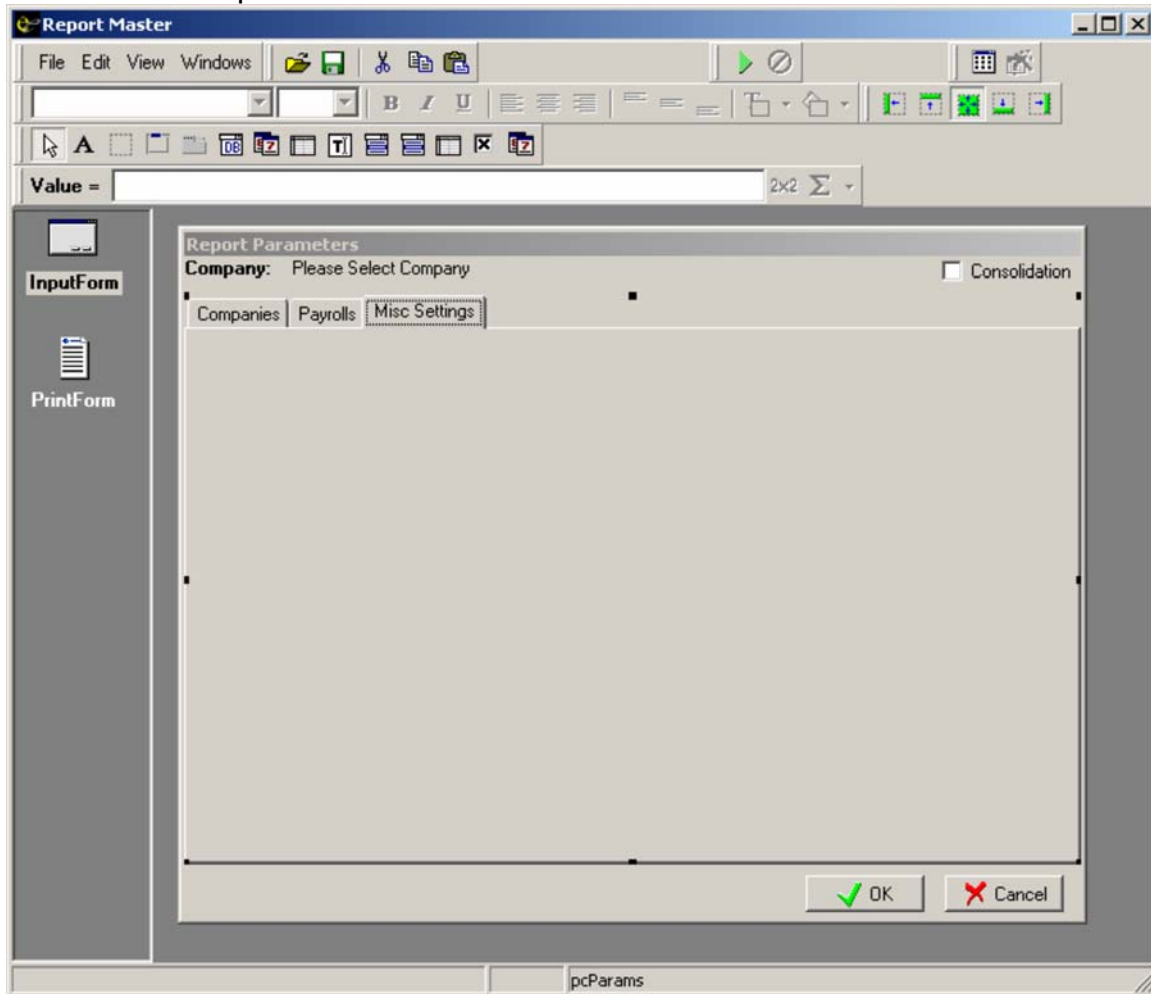


The control should now be on the input form.

## Evolution Report Master

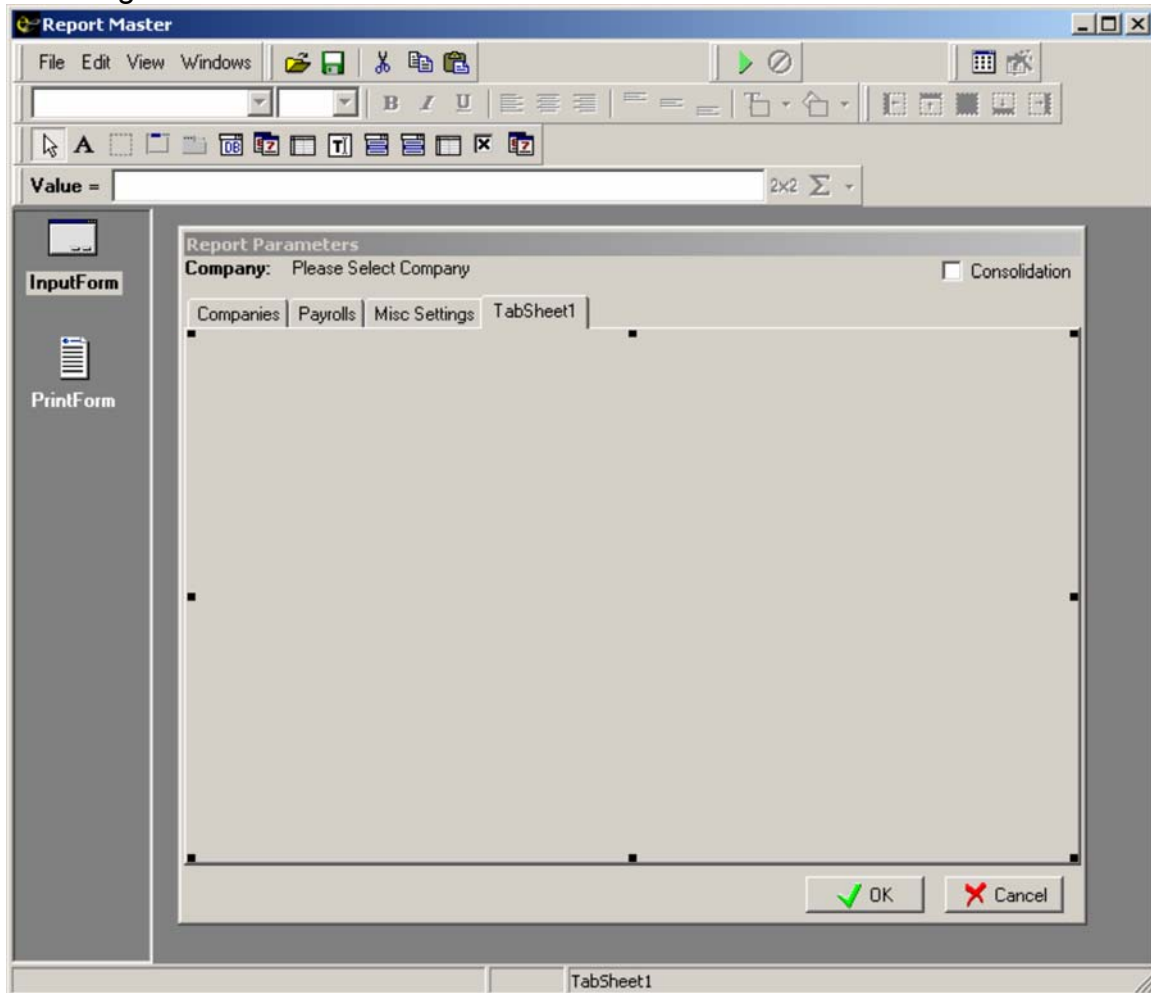
Tabs controls are a special case. Once added, tab sheets or pages must be added to the tabs control before any other controls may be added to it. To add a tab sheet to a tabs control, take the following steps:

- Click near the top of the control to set focus on it.



## Evolution Report Master

- With focus set on the tabs control, right-click anywhere on the input form and select Add New Page.



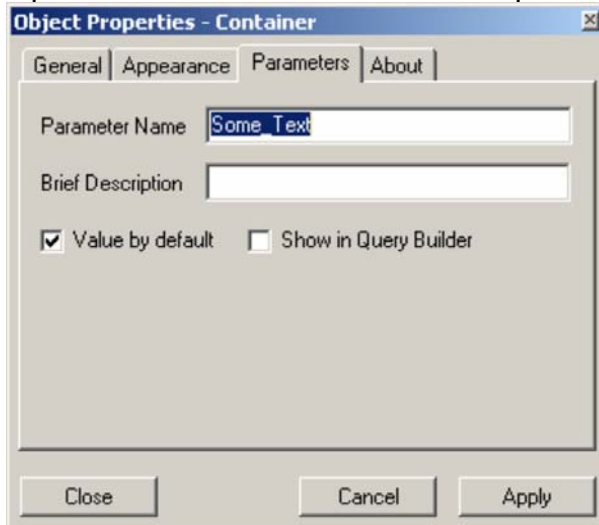
This will create a new empty tab sheet to which other controls can be added. Controls that are located on a tab sheet will only be visible when that tab sheet is selected.

### b) Controls and Parameters

Most input form controls can be used to set runtime parameters that can be used later on in objects that exist in the print form. By using those parameters in the print form, data selection can be limited to what the user selected on the input form. Parameters are named in the input form control's Object Properties dialog on the Parameters tab. If there is no Parameters tab, that object cannot be used to create parameters.

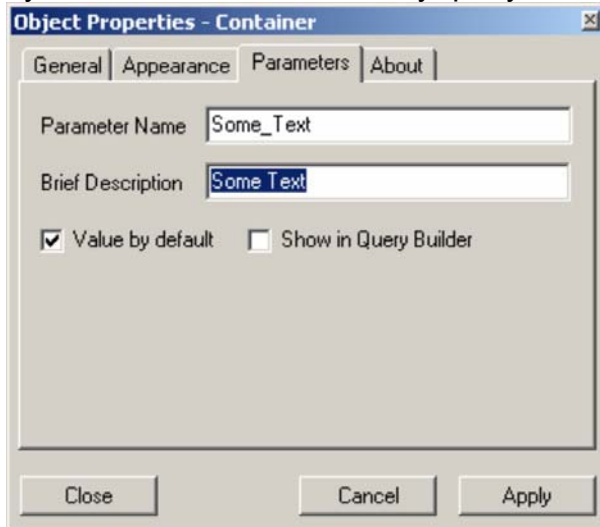
The value assigned to a parameter may come from the result of a query that is part of an input form control. It may also be independent of a query, in the case of a check box, or text that is entered into a text edit box. The type of control a parameter value comes from will determine whether the parameter value is based on a query result or is independent of a query. To assign a value from a text edit box to a parameter, take the following steps:

- On the Parameters tab, define the Parameter Name. This name must start with an alphabet character and contain no spaces.



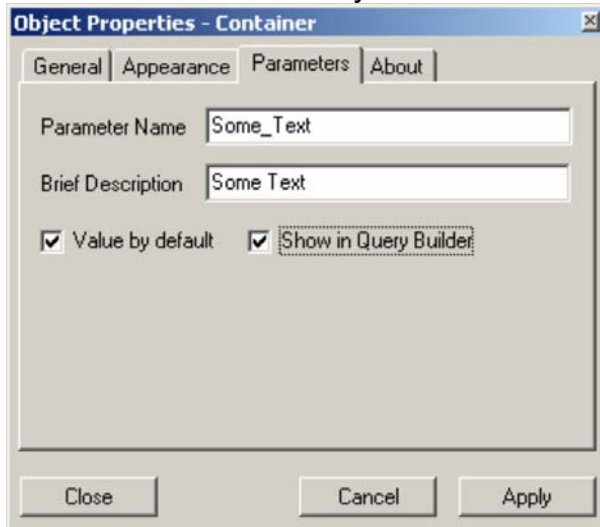
## Evolution Report Master

- Enter a descriptive name in the Brief Description box. The parameter will be referred to by what is entered here in any query that uses this parameter.



The image shows a dialog box titled "Object Properties - Container" with a close button in the top right corner. It has four tabs: "General", "Appearance", "Parameters", and "About". The "Parameters" tab is selected. Inside the dialog, there are two text input fields: "Parameter Name" containing "Some\_Text" and "Brief Description" containing "Some Text". Below these fields are two checkboxes: "Value by default" which is checked, and "Show in Query Builder" which is unchecked. At the bottom of the dialog are three buttons: "Close", "Cancel", and "Apply".

- Check the Show in Query Builder check box.



The image shows the same "Object Properties - Container" dialog box with the "Parameters" tab selected. In this state, the "Show in Query Builder" checkbox is now checked, while all other elements (Parameter Name: "Some\_Text", Brief Description: "Some Text", "Value by default" checked, and buttons) remain the same as in the previous image.

- Click Apply or Close.

At this point, the parameter defined here will be available in Query Builder's Expression Editor window on the Constant tab when the Parameter type is selected.



## Evolution Report Master

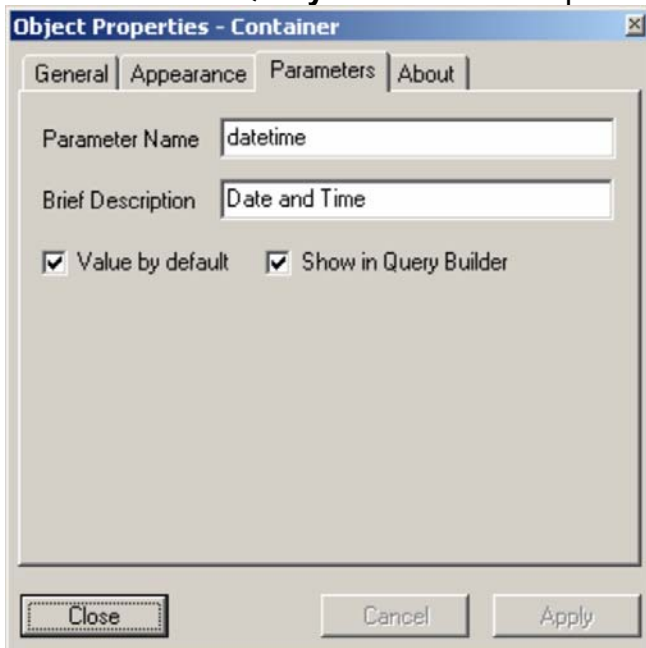
Below is a summary of input form controls and how to use them to assign runtime report parameters.

### Input Form Controls without Query:

In order to be used to set report parameters, these controls must have the following common properties assigned:

#### *Parameters tab*

- **Parameter Name** – The real name of the parameter.
- **Brief Description** – The name by which the parameter will be referenced in the report's queries.
- **Value by default** – Default parameter can be saved for this control.
- **Show in Query Builder** – Allow parameter to be used inside Query Builder.



The screenshot shows a dialog box titled "Object Properties - Container" with a close button in the top right corner. It has four tabs: "General", "Appearance", "Parameters", and "About". The "Parameters" tab is selected. Inside the dialog, there are two text input fields: "Parameter Name" with the value "datetime" and "Brief Description" with the value "Date and Time". Below these fields are two checkboxes, both of which are checked: "Value by default" and "Show in Query Builder". At the bottom of the dialog are three buttons: "Close", "Cancel", and "Apply".

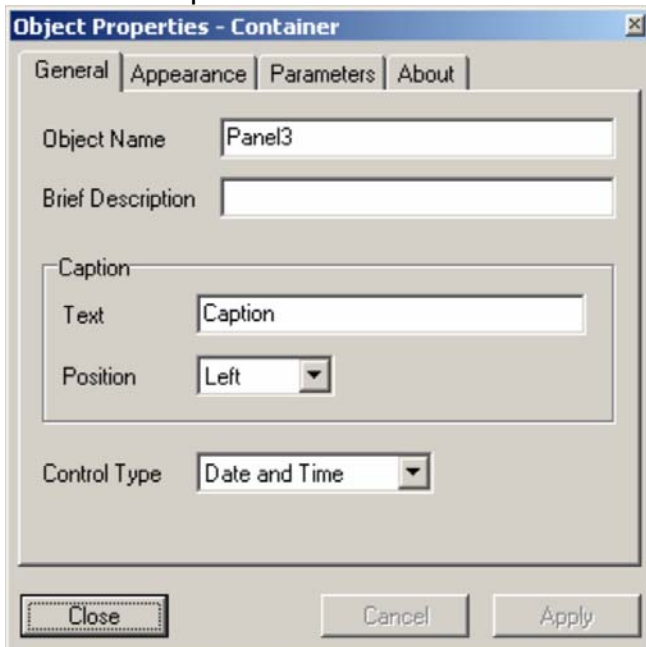
## Evolution Report Master

Each control also has some unique properties that must be set, shown below.

### Date and Time Combobox

#### *General tab*

- **Control Type** – Select whether date, time or both will be available for selection and part of the parameter value.



The screenshot shows a dialog box titled "Object Properties - Container" with a close button (X) in the top right corner. The dialog has four tabs: "General", "Appearance", "Parameters", and "About". The "General" tab is selected. Inside the "General" tab, there are several input fields and a dropdown menu. The "Object Name" field contains "Panel3". The "Brief Description" field is empty. Below these is a "Caption" section with a "Text" field containing "Caption" and a "Position" dropdown menu set to "Left". At the bottom of the "General" tab is a "Control Type" dropdown menu set to "Date and Time". At the bottom of the dialog box are three buttons: "Close", "Cancel", and "Apply".

### Text Edit Box

*No special parameters.*

## Evolution Report Master

### Combobox

#### General tab

- **Items** – Define a row for each item to be available for selection. The Description column stores the value that will be shown on the input form. The Value column stores the corresponding value to include in the report parameter for each item selected.

The screenshot shows the 'Object Properties - Container' dialog box with the 'General' tab selected. The 'Object Name' field is set to 'Panel6'. The 'Brief Description' field is empty. The 'Caption' section has 'Text' set to 'Caption' and 'Position' set to 'Left'. The 'Items' section contains a table with three rows: Connecticut (CT), Texas (TX), and Washington (WA). The 'Close', 'Cancel', and 'Apply' buttons are at the bottom.

| Description | Value |
|-------------|-------|
| Connecticut | CT    |
| Texas       | TX    |
| Washington  | WA    |

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### Field Value

This control will take the two properties below and return a list of valid field values for the selected table and field, allowing the user to select one of the items in the list. For example, a report needs to be filtered on the Tax Service option on Company – General – Company Info, Billing, Services and Delivery tab, the table in which this value is stored is CO, so the CO table would be selected in the Table dropdown. TAX\_SERVICE would be selected in the Field dropdown. This would return a list of descriptions for the three valid values for this field – Full, Direct and None – where the corresponding values stored in the database are Y, D and N.

#### *General tab*

- **Data Dictionary Info**
  - **Table** – Select the table where the field values are to come from.
  - **Field** – Select the field in the previously selected table whose field values are to display in this control.

The screenshot shows a Windows-style dialog box titled "Object Properties - Container". It has four tabs: "General", "Appearance", "Parameters", and "About", with "General" selected. The "General" tab contains several input fields and dropdown menus. "Object Name" is a text box with "Panel7" entered. "Brief Description" is an empty text box. Under a "Caption" group box, "Text" is a text box with "Security Level" and "Position" is a dropdown menu with "Left" selected. Under a "Data Dictionary Info" group box, "Table" is a dropdown menu with "Company" selected, and "Field" is a dropdown menu with "Tax Service" selected. At the bottom are three buttons: "Close", "Cancel", and "Apply".

### Field Values

Same as Field Value, except this control allows multiple items to be selected.

## Evolution Report Master

### Check Box

#### General tab

- **State Values**
  - **Checked** – Value of parameter when input form control is checked.
  - **Unchecked** – Value of parameter when input form control is unchecked.

The screenshot shows a dialog box titled "Object Properties - Container" with three tabs: "General", "Parameters", and "About". The "General" tab is selected. It contains the following fields:

- Object Name:** Panel9
- Brief Description:** (empty text box)
- Caption:** Show SSN
- State Values:**
  - Checked:** show
  - Unchecked:** do not show

At the bottom of the dialog are three buttons: "Close", "Cancel", and "Apply".

## Evolution Report Master

### Date Range with Quarters

This control has the same common properties that the rest in this category have, but because this control sets a date range, it has two sets of those controls so that two parameters may be set with this control – the begin and end dates of the date range.

#### *Parameters tab*

- **Period Begin Date** – This set is used to define the begin date parameter.
- **Period End Date** – This set is used to define the end date parameter.

**Object Properties - Container**

General Parameters About

**Period Begin Date**

Parameter Name:

Description:

☒ Value by default ☒ Show in Query Builder

**Period End Date**

Parameter Name:

Description:

☒ Value by default ☒ Show in Query Builder

Close Cancel Apply

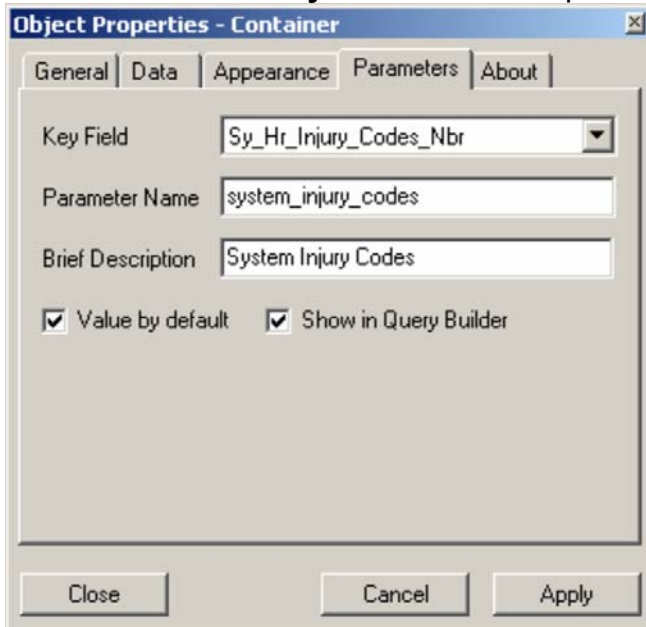
## Evolution Report Master

### Input Form Controls with Query:

These controls must have the following common fields assigned:

#### *Parameters tab*

- **Key Field** – Should be the key field of the table in the control's query. This will be the query field used to populate the parameter.
- **Parameter Name** – The real name of the parameter.
- **Brief Description** – The name by which the parameter will be referenced in the report's queries.
- **Value by default** – Default parameter can be saved for this control.
- **Show in Query Builder** – Allow parameter to be used inside Query Builder.



The screenshot shows a dialog box titled "Object Properties - Container" with a close button in the top right corner. It has five tabs: "General", "Data", "Appearance", "Parameters", and "About". The "Parameters" tab is selected. Inside the dialog, there are three text input fields: "Key Field" with a dropdown arrow, "Parameter Name", and "Brief Description". The "Key Field" dropdown is set to "Sy\_Hr\_Injury\_Codes\_Nbr". The "Parameter Name" field contains "system\_injury\_codes". The "Brief Description" field contains "System Injury Codes". Below these fields are two checked checkboxes: "Value by default" and "Show in Query Builder". At the bottom of the dialog are three buttons: "Close", "Cancel", and "Apply".

Note the Key Field property here. This is here because the data from these controls comes from tables in Evolution databases. By using the key field of the table, the parameter can be used to set conditions in Query Builder that compare the key value of a table in the query with the parameter value.

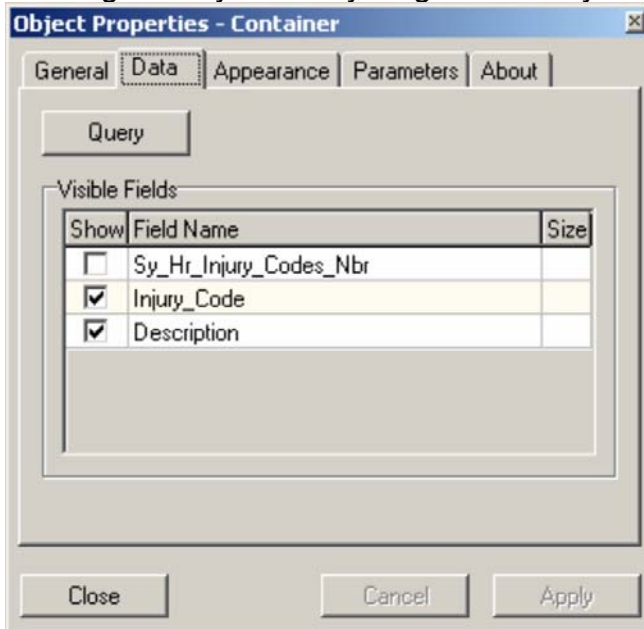
## Evolution Report Master

Each control also has some unique properties that must be set, shown below.

### DB Combobox with Query

#### *Data tab*

- **Query** – Define the query to determine what data will be available for selection.
- **Visible Fields** – Check the box next to any field to show in the control. This will generally be everything but the key field.



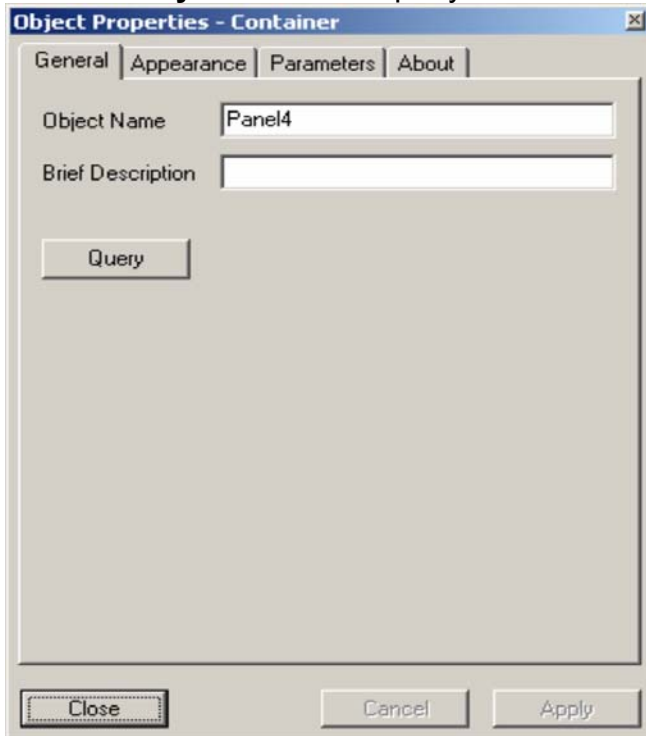


## Evolution Report Master

### DB Grid with Query

#### General tab

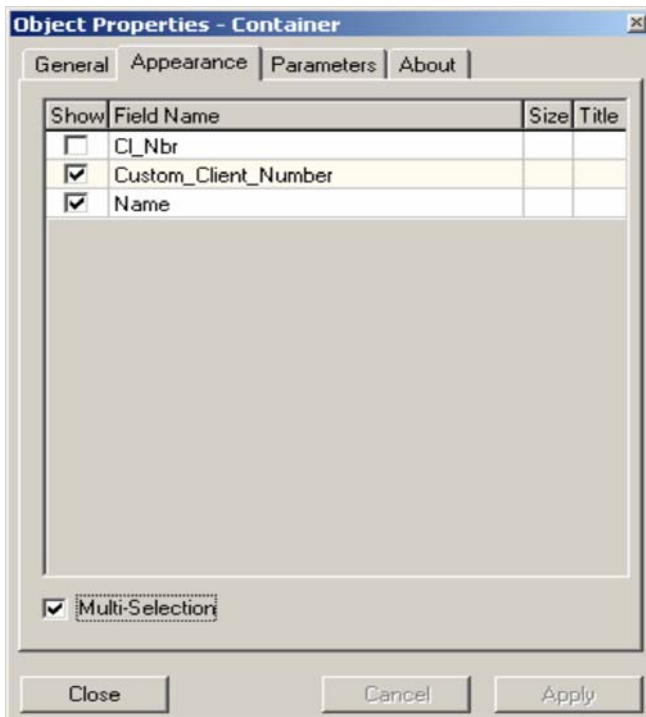
- **Query** – Define the query to determine what data will be available for selection.



The dialog box titled "Object Properties - Container" has four tabs: General, Appearance, Parameters, and About. The General tab is active. It contains two text input fields: "Object Name" with the value "Panel4" and "Brief Description" which is empty. Below these fields is a button labeled "Query". At the bottom of the dialog are three buttons: "Close", "Cancel", and "Apply".

#### Appearance

- **Visible Fields** – Check the box next to any field to show in the control. This will generally be everything but the key field.
- **Multi-selection check box** – Check to enable selection of more than one item.



The dialog box titled "Object Properties - Container" has four tabs: General, Appearance, Parameters, and About. The Appearance tab is active. It contains a table with the following structure:

| Show                                | Field Name           | Size | Title |
|-------------------------------------|----------------------|------|-------|
| <input type="checkbox"/>            | CL_Nbr               |      |       |
| <input checked="" type="checkbox"/> | Custom_Client_Number |      |       |
| <input checked="" type="checkbox"/> | Name                 |      |       |

Below the table is a large empty rectangular area. At the bottom left of the dialog is a checked checkbox labeled "Multi-Selection". At the bottom of the dialog are three buttons: "Close", "Cancel", and "Apply".

# Evolution Report Master

## E. Print Form

### 1. What is the Print Form

The screenshot displays the 'Report Master' application window. The interface includes a menu bar (File, Edit, View, Windows), a toolbar with various icons for file operations and formatting, and a status bar at the bottom. On the left side, there is a vertical toolbar with icons for 'InputForm' and 'PrintForm'. The main workspace is a large grid where a report layout is being designed. The layout includes a header section with 'Report Name' and 'Period Range'. Below this is a table with columns for '[Co\_Name]', '[Co\_Custom\_Nbr]', '[State]', '[State EIN]', and '[SUI EIN]'. Further down, there are sections for 'Employee SUI' and 'Employer SUI', each with a table containing '[Tax Name]' and '[Description]'. At the bottom, there is a section for 'Selected Companies' and a footer area with fields for 'SB Name', 'Phone', 'Fax', and 'Email'. The design is enclosed in a dashed blue border.

The **print form** is where the layout of the report is defined. This is done by adding and customizing the various components that are available for use on the print form. Those components are described later in the Print Form Component Overview section.

### 2. Print Form Buttons

As with the input form, several buttons are available at the top of the Report Master print form window. Those buttons can be divided into the same two categories:

- **Action buttons**
- **Object buttons**

The object buttons are reviewed later in the Print Form Component Overview section. The action buttons are reviewed in this section, listed below:



- **File** – New report, open, save or exit
- **Edit** – Cut, copy, paste or delete
- **View** – Expert Mode, Show Paper Grid, Show Table Grid, Zoom In or Zoom Out
- **Windows** – Toggle between open reports or Close active report



- **Open from file** – Opens a report previously saved to a file
- **Save into file** – Saves the active report to a file
- **Cut** – Cuts selected text or object to clipboard
- **Copy** – Copies selected text or object to clipboard
- **Paste** – Pastes whatever was last cut or copied from the clipboard to the report
- **Zoom In** – Show larger, more detailed view
- **Zoom Box** – Enter a higher percent to zoom in, and a lower percent to zoom out
- **Zoom Out** – Show smaller, less detailed view



- **Run Report** – Runs active report
- **Terminate Running** – Terminates running of active report

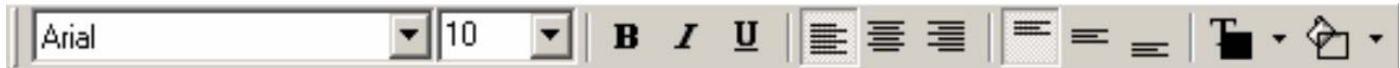


- **Set Default Report Parameters** – Run input form and select default input form parameters
- **Query Builder** – View Query Builder window



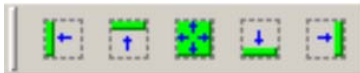
- **Value =** – Displays value or expression of selected object
- **2x2 (Formula Editor)** – Show Formula Editor for selected object
- **Σ (Add Aggregate Function)** – Quick insert aggregate function (sum or count) into selected object

## Evolution Report Master



All font buttons affect the text of the selected object:

- **Font Name** – Select font
- **Font Size** – Select font size
- **Bold** – Toggle emboldened font
- **Italic** – Toggle Italicized font
- **Underlined** – Toggle underlined font
- **Left Justify** – Print text as far left as possible
- **Center** – Print text in horizontal center
- **Right Justify** – Print text as far right as possible
- **Top Text Layout** – Print text as high as possible
- **Center Text Layout** – Print text in vertical center
- **Bottom Text Layout** – Print text as low as possible
- **Text Color** – Select color of text
- **Background Color** – Select color of background



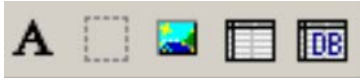
- **Left Alignment** – Selected object is resized to the height of the parent object and moved so that the left boundary of the selected object is even with the left boundary of the parent object. Width does not change.
- **Top Alignment** – Selected object is resized to the width of the parent object and moved so that the top boundary of the selected object is even with the top boundary of the parent object. Height does not change.
- **Client Alignment** – Selected object is resized to the height and width of the parent object and moved so that the left, right, top and bottom boundaries of the selected object are even with the corresponding boundaries of the parent object.
- **Bottom Alignment** – Selected object is resized to the width of the parent object and moved so that the bottom boundary of the selected object is even with the bottom boundary of the parent object. Height does not change.
- **Right Alignment** – Selected object is resized to the height of the parent object and moved so that the right boundary of the selected object is even with the right boundary of the parent object. Width does not change.



- **Select Mode** – Changes mouse-pointer to select mode from object add mode.

### 3. Print Form Component Overview

As with the input form, **components** are also used on the print form. While the components on the input form allow for user input at runtime, print form components give users the ability to define the layout of the report output. Each component available for use on the print form is listed below:



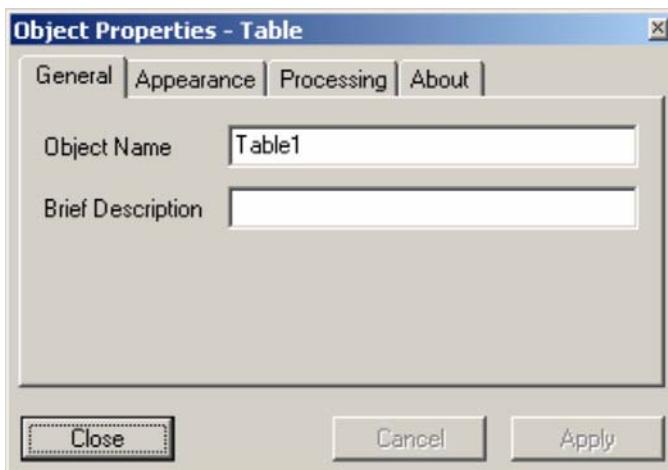
- **Print Form Text** – Static text
- **Print Panel** – Container that other components may be added to
- **Print Image** – Container into which an image may be loaded to print in a report
- **Table** – Container that can include any number of cells which form rows and columns
- **Database Table** – Container with an embedded query. It can include various types of bands which will print the data returned by the table's embedded query.

Tables are usually the basic component of any report. Report Master has two types:

- **Simple Table**
- **Database Table**

Both types share some common characteristics. Both consist of columns and rows. Every column and row is made up of cells. Each cell can show data. That data may be defined in a variety of ways, from static text defined prior to runtime, to an entirely different table, referred to as a subtable. Subtables are the same, consisting of columns and rows that are made up of cells.

Right-clicking on a print form object shows the Object Properties selection. After selecting Object properties, the Object Properties – <object type> dialog will appear. All print form objects have this dialog.



## Evolution Report Master

Every print form object type has a common set of tabs and properties shown in the Object Properties dialog. Those common tabs and properties are reviewed below.

### *General*

- **Object Name** – Name of the selected object. This is the name by which this object will be referenced in Formula Editor on the Object tab. The object name must be unique within the parent object.
- **Brief Description** – Description of the object. Informational only.

### *Appearance*

- **Font** – Display Font dialog to format the font of the selected object. Available when applicable for the selected object.
- **Color** – Background color of the selected object.

### *Processing*

- **Allow to cut between Pages** – If the selected object extends beyond a single page, the object will print in the space available, and the remaining part of the object will print on the following page. For example, the detail band of a report may need 2 inches of space to print, but it is at the end of a page and only 1 inch of space is available. With this check box unchecked, no part of this object would print at the bottom of that first page. The entire object would print at the top of the next page. With the check box checked, part of the object would print at the bottom of the first page, and the rest of the object would print at the top of the next page.
- **Print on each Page** – Print selected object on each page.
- **Scroll overflowing content (Virtual Page)** – Maintain object size, regardless of object content. The object will be printed on each page until all object content has been printed. Available when applicable for the selected object.

### *About*

- **Object type** – Type and description of the selected object.

## Evolution Report Master

Each print form object also has its own special properties. These are described below.

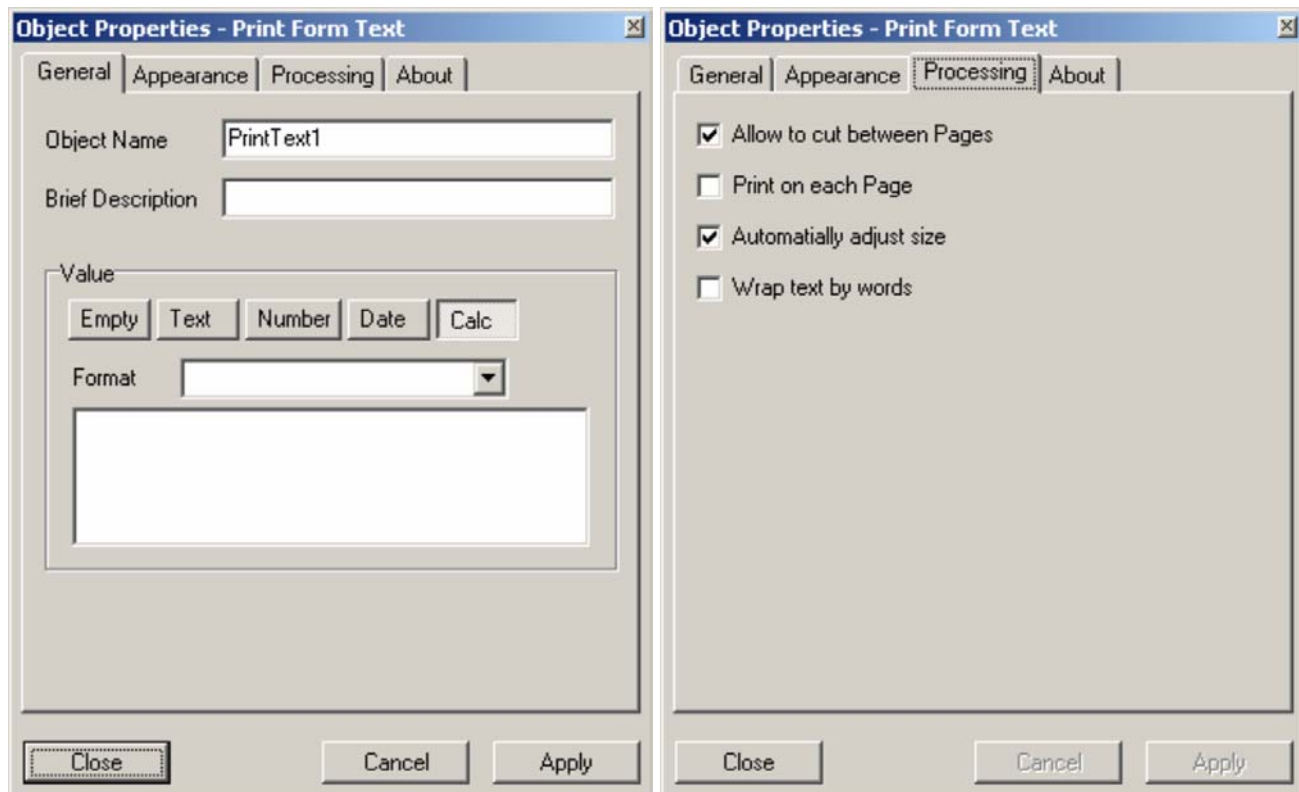
### Print Form Text

#### General tab

- **Value** – Define the value to print in the print form text. This value can be either static or dynamic, depending on how it is defined here. To populate the object dynamically, a formula must be defined in the Formula box. To define the formula, select the object whose formula is to be defined and click the 2x2 Formula Editor button to display the Formula Editor dialog. Another way to do this is by clicking the Calc button shown below, then clicking on the Formula box.

#### Processing tab

- **Automatically adjust size** – Adjust the object's size to match the size of the object's text.
- **Wrap text by words** – If the text of the object has a width greater than the width of the object, the remaining text will be printed on a second line.



## Evolution Report Master

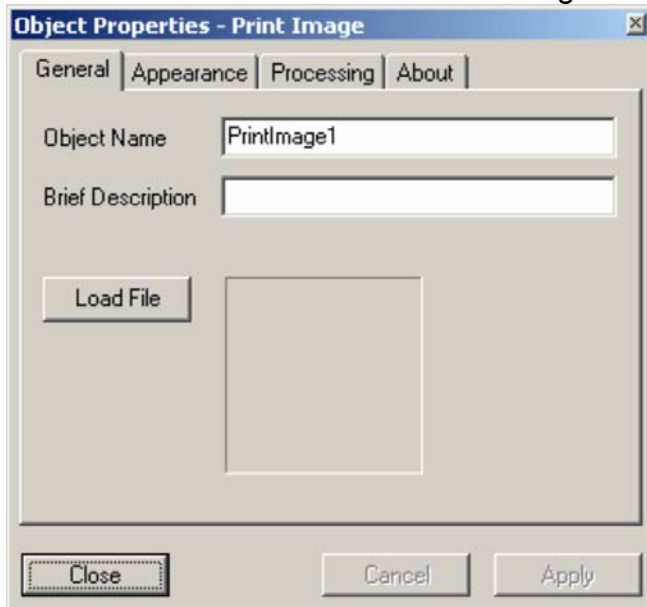
### Print Panel

*No special parameters.*

### Print Image

*General tab*

- **Load File** – Click to load an image saved to a file that will print in the print image object.



### Table

*No special parameters.*



## Evolution Report Master

### Database Table

#### General tab

- **Query** – Click to open Query Builder and define the table's query

#### Grouping tab

- Define all report grouping here, including fields to group on, the existence of group headers or footers, page-breaking after a group, and order or grouping. This is explained in detail later in the Grouping section.

The image displays two screenshots of the 'Object Properties - DataBase Table' dialog box, illustrating the configuration options for a database table in a report.

**Left Screenshot (General tab):**

- Object Name:** DBTable1
- Brief Description:** (Empty text box)
- Query:** (Button to open Query Builder)
- Buttons:** Close, Cancel, Apply

**Right Screenshot (Grouping tab):**

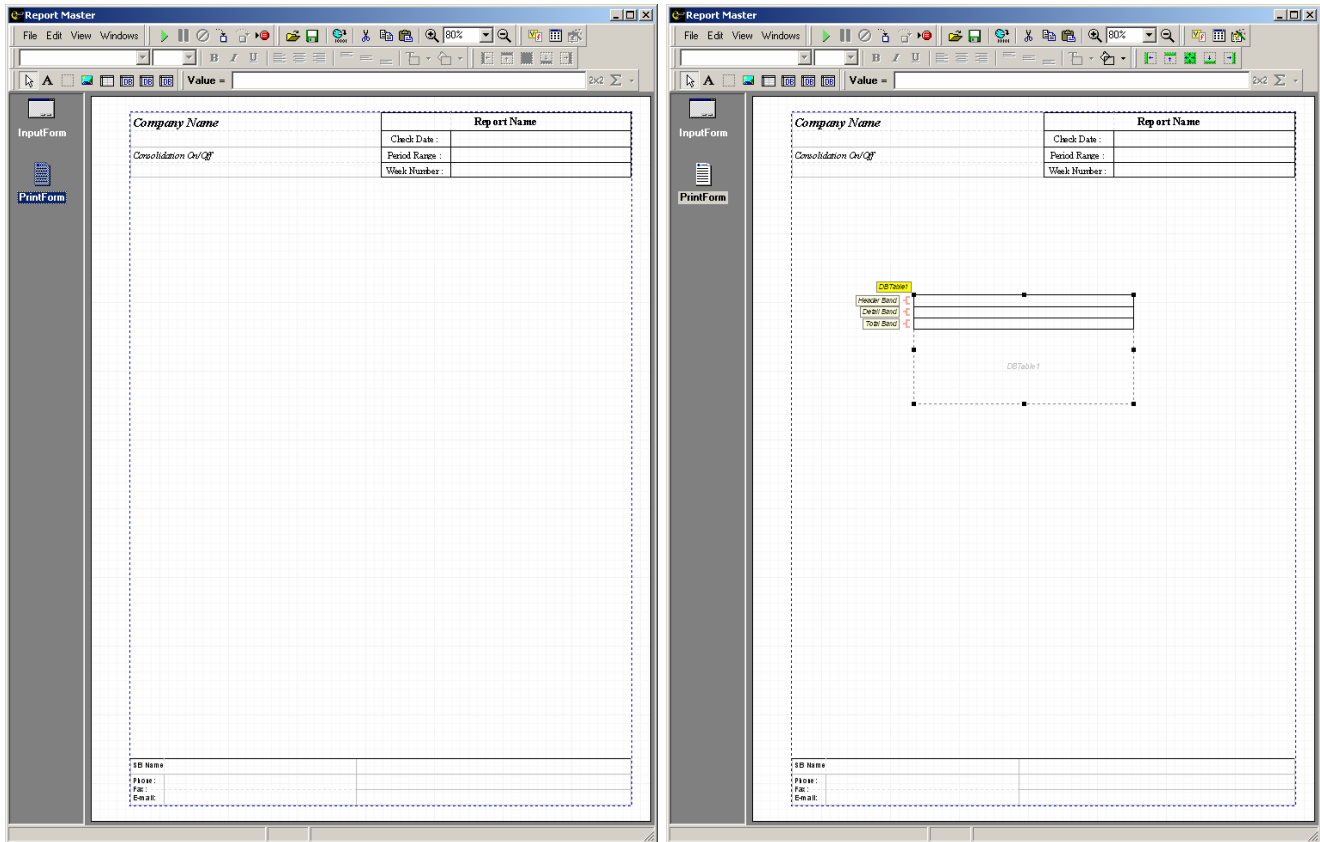
- Group Name:** (Text box)
- Group Fields:** (List box)
- Buttons:** Add Group, Delete Group, Move Up, Move Down
- Checkboxes:**
  - ☐ Header Band
  - ☐ Footer Band
  - ☐ Break Page after this group
  - ☐ Disabled Group
  - ☐ Inherited Group
- Buttons:** Close, Cancel, Apply

# Evolution Report Master

## 4. Alignment

In Report Master, every object added to the print form or input form is inside another object. For example, the print form starts off with an empty container. For information to print on that report, a database table might be added to the report. That database table is added to the main print form container.

When an object (child) is added to an existing object (parent), the space to which the child object can print is limited first by the size of the child object, and then by the size of the parent object. This means that in order for the child object to take up as much space as is available in the parent object, it needs to be resized. That is easily accomplished through the alignment buttons. For example, in the case where a new report is being created and the print form is initially empty, a database table may be dropped into the print form and the Client Alignment button clicked. This will resize the database table to fill the empty print form. It will also align all table boundaries (top, bottom, left, right) with the boundaries of the print form. This process is shown below:



# Evolution Report Master

Report Master

File Edit View Windows

Value =

InputForm

PrintForm

| Company Name         |  | Report Name    |  |
|----------------------|--|----------------|--|
| Consolidation On/Qtr |  | Check Date :   |  |
|                      |  | Period Range : |  |
|                      |  | Week Number :  |  |

DETTable1

| SD Name |
|---------|
| Phone : |
| Fax :   |
| Email : |

### 5. Simple Tables

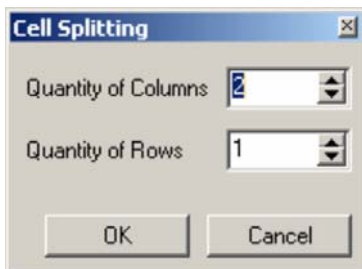
A **simple table** (referred to as table from this point forward) is a table that does not have a built-in query or bands. It is simply a number of cells organized into columns and rows inside a container.

When a table is initially dropped into a report, it is made up of a container that has a single cell inside. To add cells to the table, the initial cell in the table must be split into rows and columns. This is done by right-clicking on the cell. The cell can be split into as many columns and rows as will fit into the container.

When the table is right-clicked, the following options appear:

- **Object Properties**
- **Split Cell**
- **Merge Cells**
- **Create Subtable**

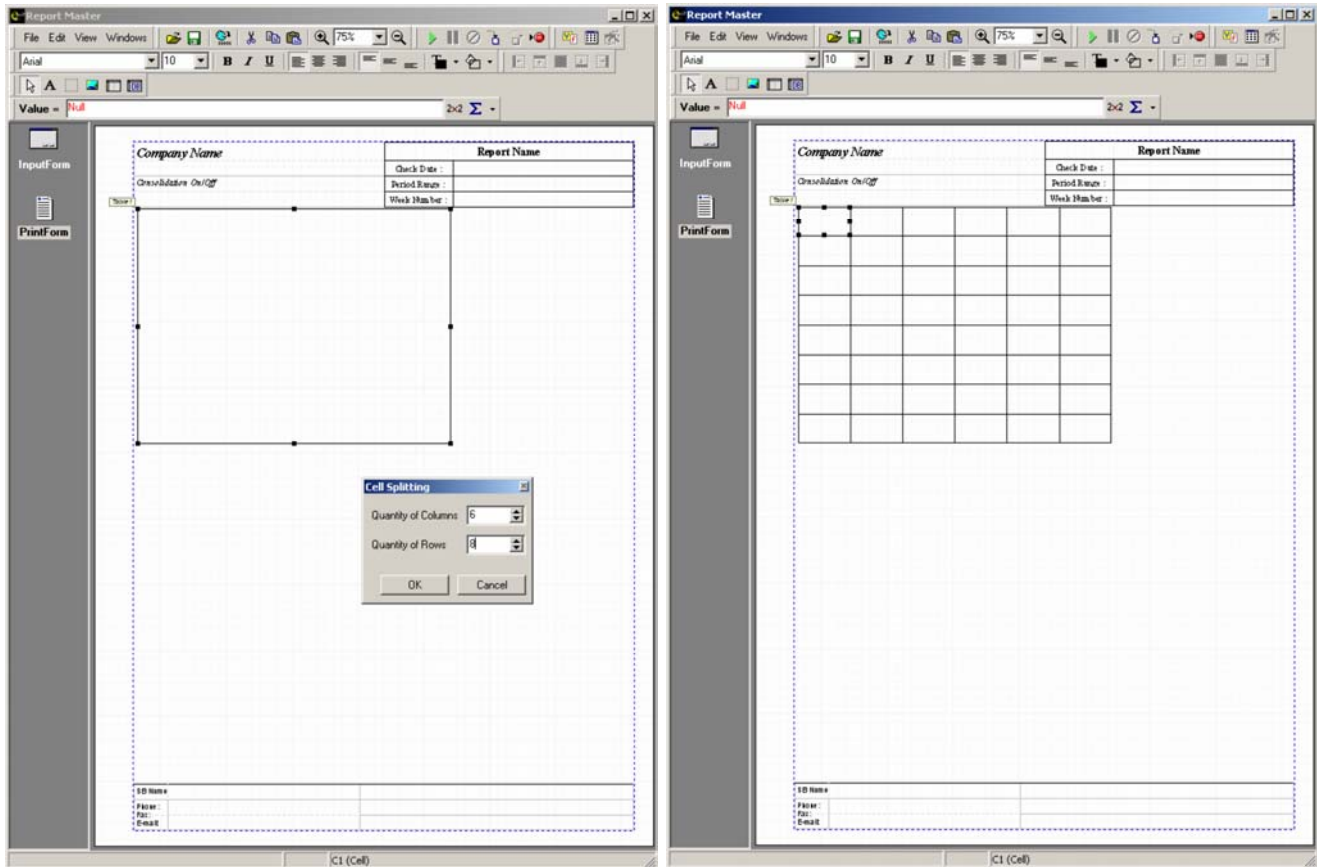
When Split Cell is selected, the Cell Splitting window appears:



The quantity of columns and rows is entered here. When the OK button is clicked, the selected cell will be split as specified.

## Evolution Report Master

The process of cell splitting is shown below. The first screen shot shows the cell inside the table being right-clicked on, and the number of columns and rows is entered. The second screen shot shows the table that results from splitting the cell in table one:

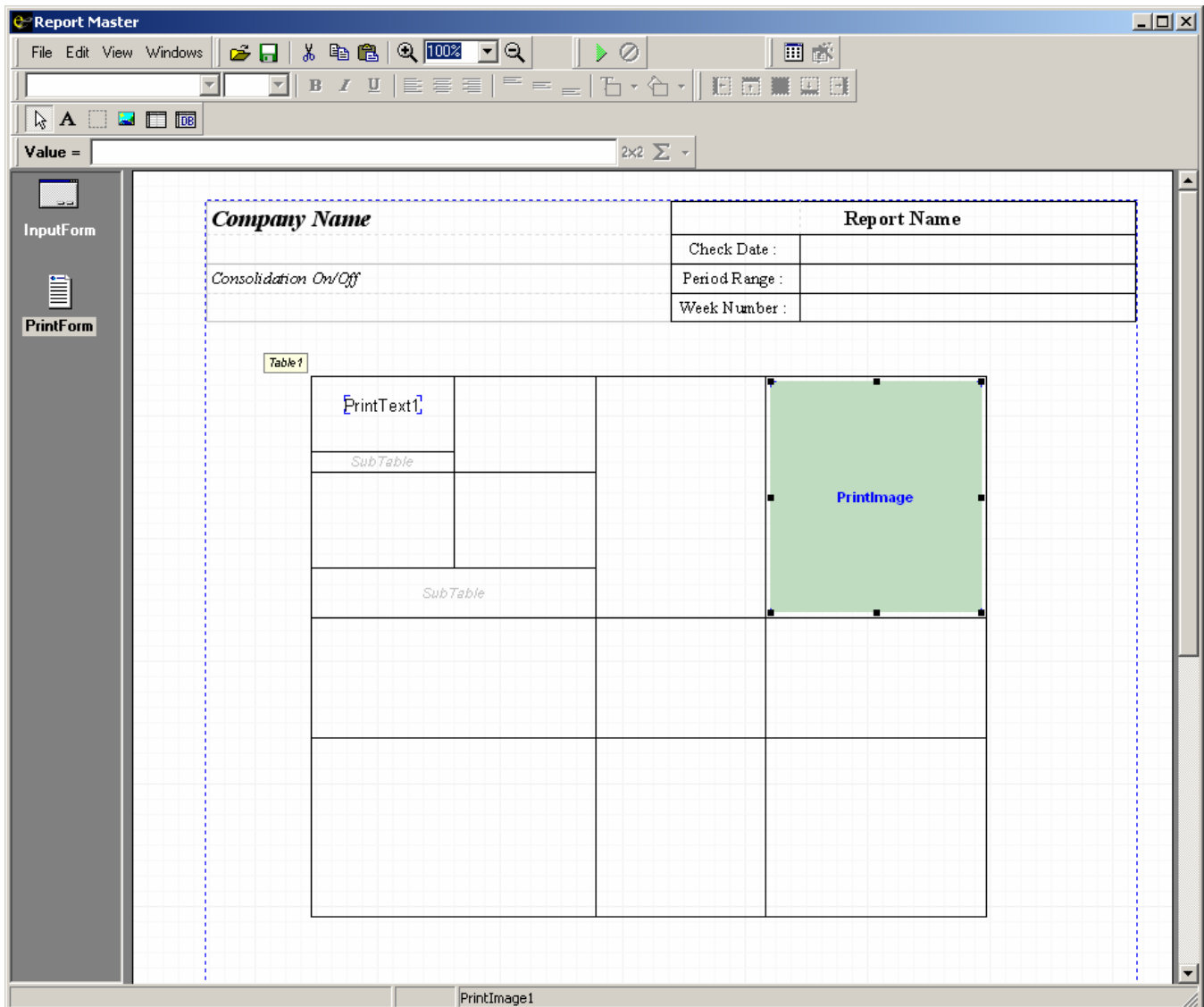


## Evolution Report Master

### a) Cells

The **cell** is the building block of any table. Each cell can be customized to display unique content through the Object Properties dialog. The cell is also a container, so another object may be dropped into it.

In the example below, a table has been split into a 3x3 table. A subtable has been added to the main table in the cell in the upper left corner. The detail band of that subtable has been split into 4 more cells, and another subtable added to the cell in the upper left corner of the detail band. Finally, a print image was dropped into the cell in the upper right of the main table.



## Evolution Report Master

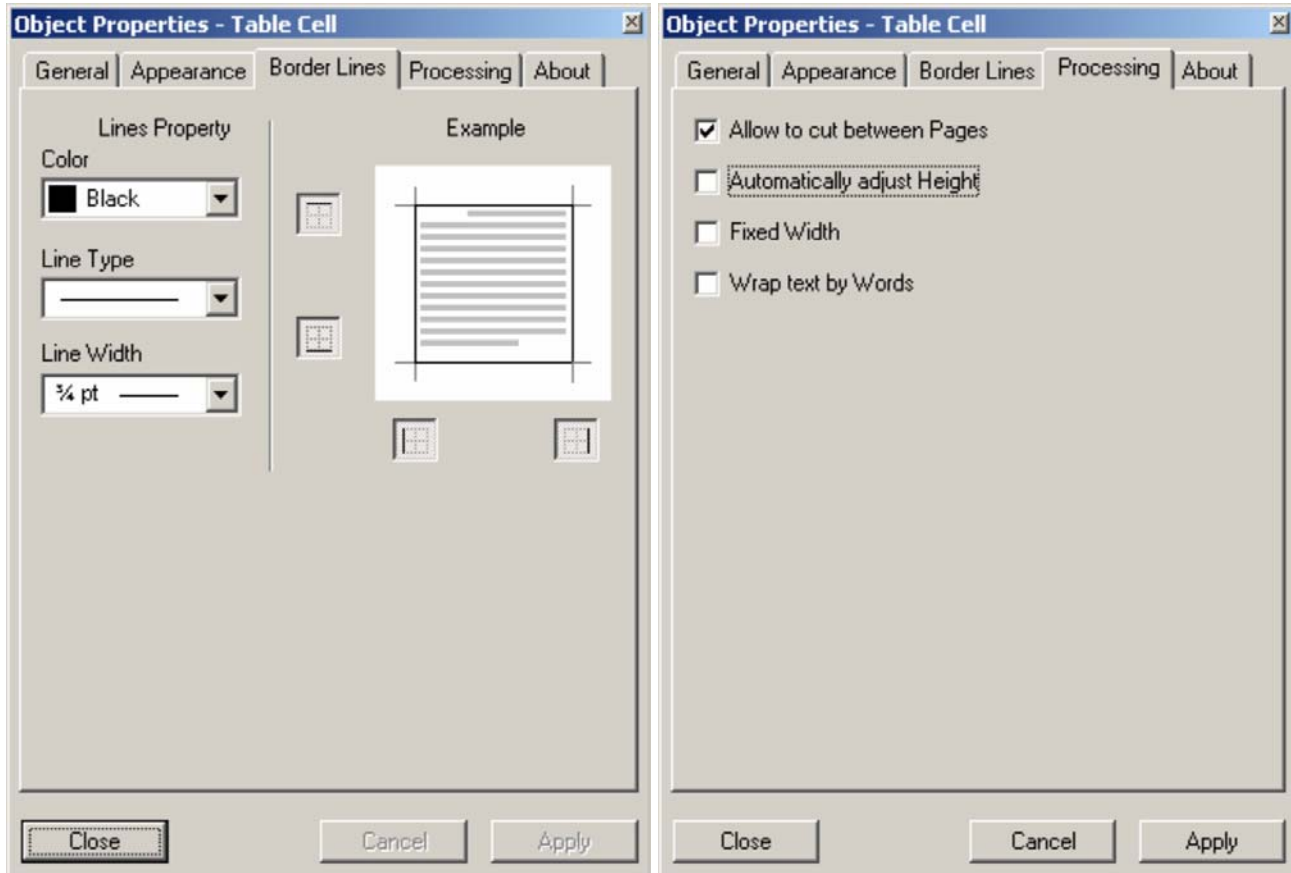
The Object Properties dialog for a table cell is similar to that of the print form text. The differences are shown below.

### *Border Lines tab*

- Define the cell border lines' size, type and width, and select which borders will have border lines.

### *Processing tab*

- **Automatically adjust Height** – Adjust the height of the cell to the height necessary to show all cell content



# Evolution Report Master

## 6. Database Tables

### a) What is a Database Table?

The **database table** is a print form component that can be used to print data returned from a query. Using the various properties of the database table, that data can be formatted, grouped and joined with data returned by a child subtable's query. Columns in a database table can be set up to calculate a value based on data returned by that table's query or a subtable's query. They can also be set up to calculate a value based on other calculated columns.

The screenshot displays the 'Report Master' application window. The interface includes a menu bar (File, Edit, View, Windows), a toolbar with various icons, and a status bar at the bottom showing 'DBTable1'. On the left side, there is a vertical toolbar with 'InputForm' and 'PrintForm' buttons. The main workspace is a grid where a report is being designed. At the top left of the grid, there is a section for 'Company Name' and 'Consolidation On/Off'. To the right of this is a table for 'Report Name' with three rows: 'Check Date :', 'Period Range :', and 'Week Number :'. Below these, a large rectangular area is designated for 'DBTable1'. To the left of this area, there are three stacked boxes labeled 'Header Band', 'Detail Band', and 'Total Band', each with a red bracket indicating its scope within the table area. The 'DBTable1' label is also present in the bottom right corner of the grid area.

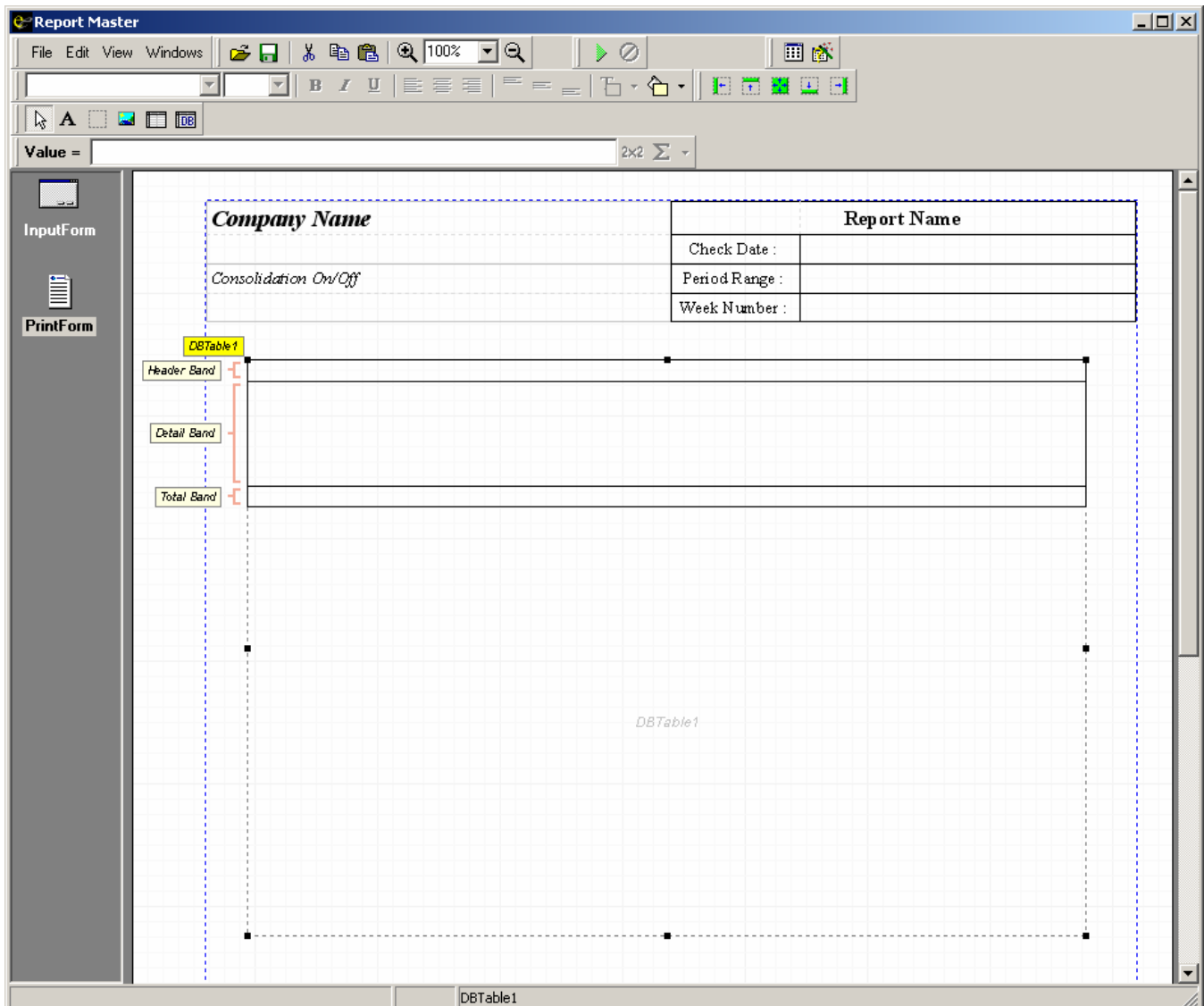


## Evolution Report Master

### b) Band Types

Every database table has the ability to print three standard **bands**:

- **Header band** – Can be set up to print once at the beginning of the table, or at the top of every page if the table requires multiple pages to print its entire content. This band is useful for printing column headers or anything else that should be available to view on the first page of the report, or on every page of the report. This band can be removed by right-clicking on the table, selecting Table Bands and unchecking Table Header.
- **Detail band** – Printed once for each row of data returned by the table's query.
- **Total band** – Printed once after the last instance of the detail band has been printed. This band can be removed by right-clicking on the table, selecting Table Bands and unchecking Table Total.



## Evolution Report Master

There are two other types of bands which are not part of the database table by default:

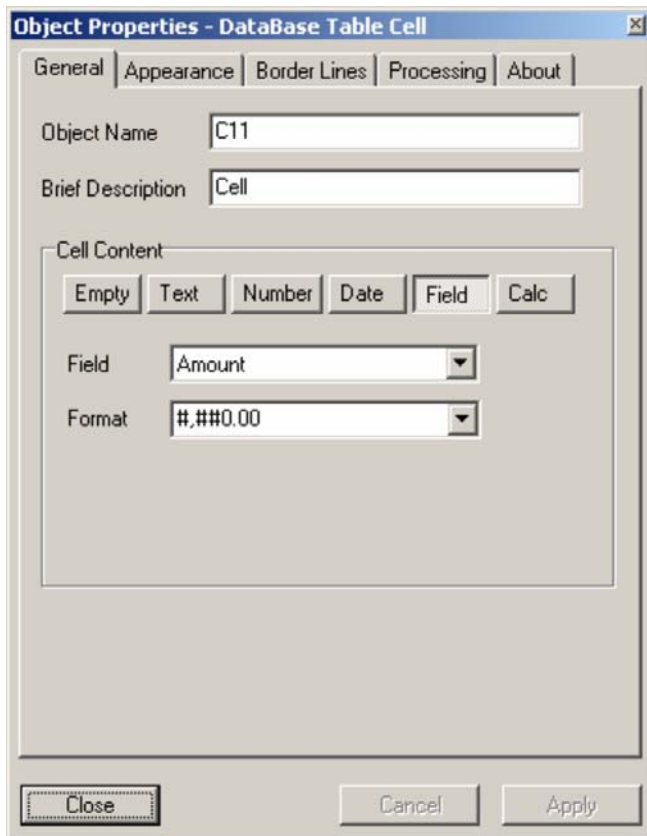
- **Group Header band** – Printed at the beginning of a group.
- **Group Footer band** – Printed at the end of a group.

Group bands may be individually added and removed, or the entire group may be disabled. This is discussed in more detail in the Grouping section.

## Evolution Report Master

### c) Cells

Each band in the database table, regardless of type, is made up of **cells**. A database table's cells have the same properties that a table's cells have, with one addition. On the Object Properties dialog of a database table cell, an extra button may be found labeled Field. This allows the selection of a column returned by that database table's query. This tells Report Master to print the value stored in that column in that database table cell.



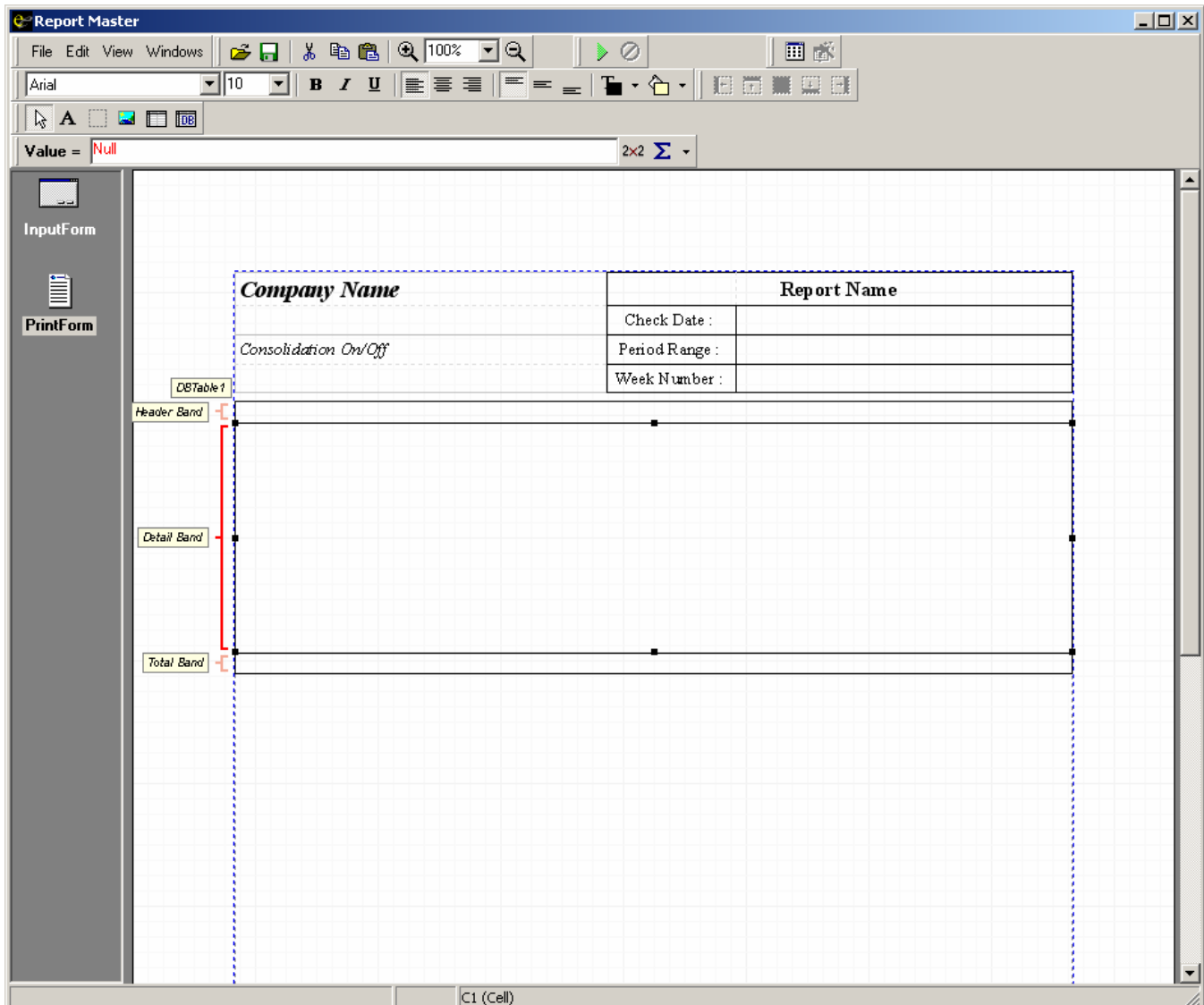
## Evolution Report Master

### d) Subtables

A **subtable** is a database table that has been created inside a cell that is part of another table or database table. Subtables behave in a way that is similar to that of database tables. The purpose of the subtable object is to allow for the joining of the subtable's query with the parent table's query. This is done via the master-detail join. This matches the data from one with that of the other on the field being joined on. This will be explained in detail in the Joins section.

For flexibility, subtables may also be standalone tables like regular database tables. For example, maybe a subtable must always show the same data, and that data is stored in a database somewhere. A subtable could be added to a simple table, in which case there would be no master query in the parent table.

To add a subtable to a cell, focus must be on the cell to which the subtable is to be added. The cell is right-clicked on, and the Create subtable option is selected. The screen shot below shows a database table with focus on the cell in the detail band.



## Evolution Report Master

The screen shot below shows what the database table looks like after the subtable has been created in that detail band cell.

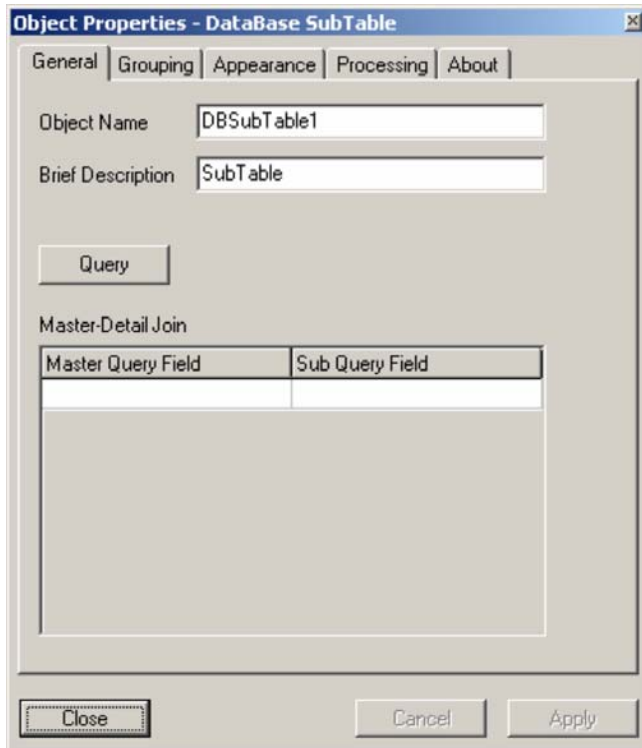
The screenshot displays the 'Report Master' application window. The interface includes a menu bar (File, Edit, View, Windows), a toolbar with various icons, and a status bar at the bottom showing 'DBSubTable1 (SubTable)'. On the left, there is a sidebar with 'InputForm' and 'PrintForm' buttons. The main workspace shows a report layout on a grid background. At the top, there is a header section with a table containing the following data:

| <i>Company Name</i>  | Report Name    |  |
|----------------------|----------------|--|
| Consolidation On/Off | Check Date :   |  |
|                      | Period Range : |  |
|                      | Week Number :  |  |

Below the header, a 'Sub Table' is defined within a 'Detail Band'. The subtable area is outlined with a blue dashed border and contains a large empty rectangular space. A yellow label 'Sub Table' is positioned to the left of the subtable's top-left corner. A red line indicates the 'Detail Band' on the left side of the subtable. The status bar at the bottom right of the workspace shows 'DBSubTable1 (SubTable)'.

### e) Master-Detail Joins

When working with database tables (including subtables), it is possible to join that parent database table's query with that of a child subtable's query using the child subtable's **Master-Detail Join** feature. This is available on the General tab of the Object Properties dialog.

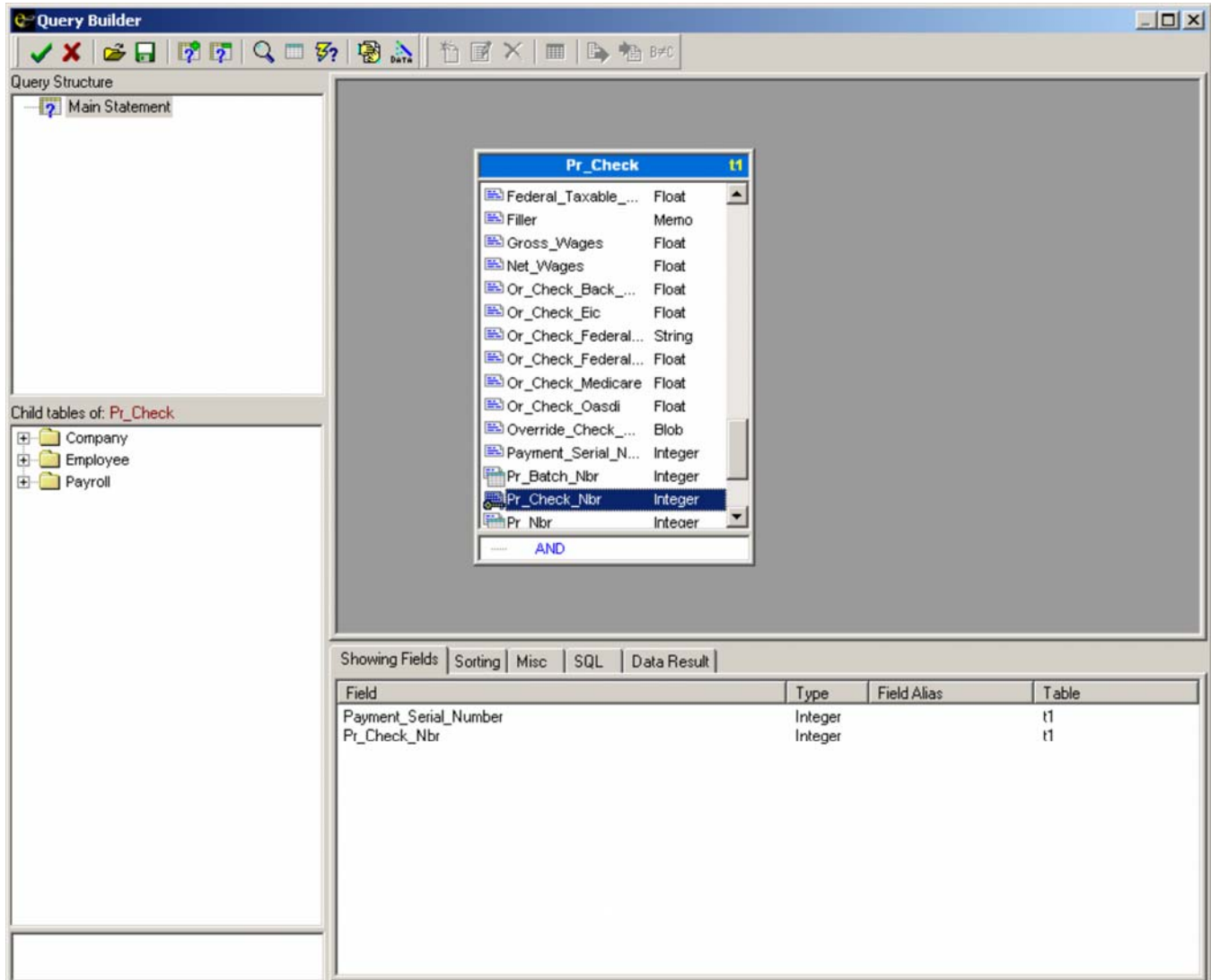


The image shows a dialog box titled "Object Properties - DataBase SubTable". It has five tabs: "General", "Grouping", "Appearance", "Processing", and "About". The "General" tab is selected. Inside the dialog, there are two text input fields: "Object Name" with the value "DBSubTable1" and "Brief Description" with the value "SubTable". Below these is a "Query" button. Underneath is a section titled "Master-Detail Join" which contains a table with two columns: "Master Query Field" and "Sub Query Field". The table has one empty row below the headers. At the bottom of the dialog are three buttons: "Close", "Cancel", and "Apply".

| Master Query Field | Sub Query Field |
|--------------------|-----------------|
|                    |                 |

## Evolution Report Master

To create a master-detail join, each database table's query must be defined. For example, a report might need to show earnings and deductions in separate columns, independent of each other. The first step is to define the parent database table's query to return the check's payment serial number, along with the key field of the check table, pr\_check\_nbr. This data comes from the pr\_check table.



## Evolution Report Master

This means that the table will print one instance of the detail band for every row of data returned by this main database table's query. The detail band might be split into two rows, the first row printing payment serial number. The second row of the detail band could then be split into two columns, each one with its own subtable.

The screenshot shows the 'Report Master' application window. The title bar reads 'Report Master'. The menu bar includes 'File', 'Edit', 'View', and 'Windows'. The toolbar contains various icons for file operations, editing, and formatting. Below the toolbar, there is a font face dropdown set to 'Arial', a font size dropdown set to '10', and buttons for bold, italic, underline, and text color. A 'Value =' field is set to 'Null', and a '2x2' grid icon is visible. On the left side, there is a vertical toolbar with icons for 'InputForm' and 'PrintForm'. The main workspace is a grid where a report is being designed. A table structure is visible, with a header band containing 'Company Name' and 'Report Name'. Below the header, there is a detail band with a row for '[Payment Serial Number]'. The detail band is further divided into two subtables, each labeled 'SubTable'. The report is enclosed in a dashed blue border. On the left side of the workspace, there are labels for 'DBTable1', 'Header Band', 'Detail Band', and 'Total Band'. The status bar at the bottom indicates 'C5 (Cell)'.

| Company Name            |  | Report Name    |  |
|-------------------------|--|----------------|--|
| Consolidation On/Off    |  | Check Date :   |  |
|                         |  | Period Range : |  |
|                         |  | Week Number :  |  |
| [Payment Serial Number] |  |                |  |
| SubTable                |  | SubTable       |  |



## Evolution Report Master

The two subtables might return custom E/D code, check line amount and pr\_check\_nbr, with a condition added that requires the code type of the E/D to start with the letter E or D to only return earning or deduction check lines. This data comes from the pr\_check\_lines table. This means that the detail band of each subtable will print once for every check line being returned by the subtable's query.

**Query Builder**

Query Structure: Main Statement

Child tables of: Cl\_E\_Ds

- Client
- Company
- Employee
- Payroll

**Pr\_Check\_Lines t1**

**Cl\_E\_Ds t2**

t2.Cl\_E\_Ds\_Nbr = t1.Cl\_E\_Ds\_Nbr

Fields in Cl\_E\_Ds:

- Default\_Cl\_Agency\_Nbr (Integer)
- Default\_Hours (Float)
- Description (String)
- E\_D\_Code\_Type (String)
- Ee\_Exempt\_Excl\_Medicare (String)
- Ee\_Exempt\_Exclude\_Eic (String)
- Ee\_Exempt\_Exclude\_Federal (String)
- Ee\_Exempt\_Exclude\_Oasdi (String)
- Effective\_Date (Date)
- Er\_Exempt\_Excl\_Medicare (String)
- Er\_Exempt\_Exclude\_Fui (String)
- Er\_Exempt\_Exclude\_Oasdi (String)
- Filler (Memo)

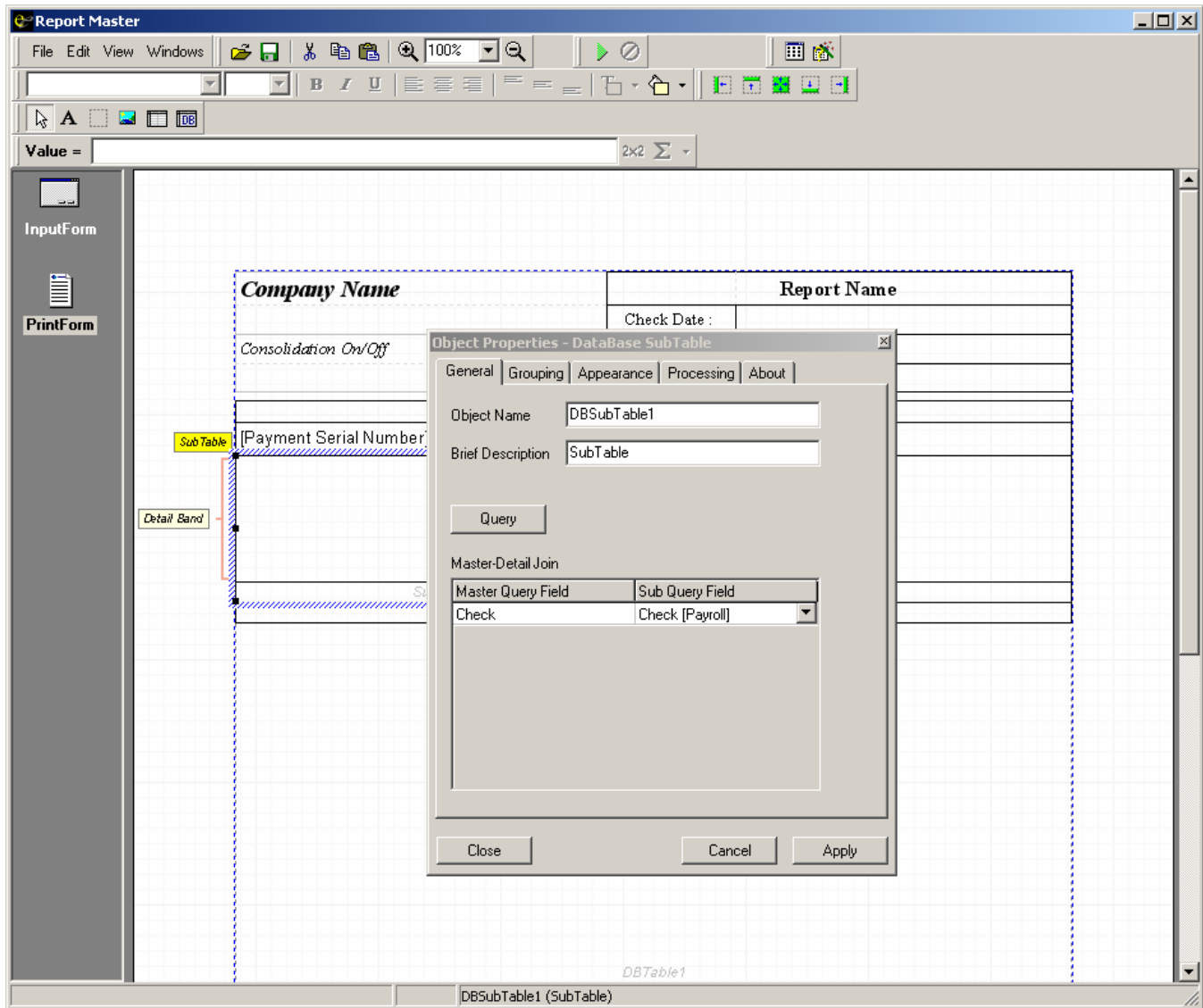
Filter: AND t2.E\_D\_Code\_Type STARTED Like 'E'

Showing Fields | Sorting | Misc | SQL | Data Result

| Field                  | Type    | Field Alias | Table |
|------------------------|---------|-------------|-------|
| Pr_Check_Nbr           | Integer |             | t1    |
| Custom_E_D_Code_Number | String  |             | t2    |
| Amount                 | Float   |             | t1    |

## Evolution Report Master

Without the master-detail join, every check line would print with every check printed. However, with the key field of the check table located in both the check lines and checks tables, it can be determined which check each check line belongs to. Because the field `pr_check_nbr` is being returned by the queries in both the database table and each subtable, that field can be selected in the Master-Detail Join area in each subtable's Object Properties dialog as the Master Query Field and the Sub Query Field.



This instructs the subtable to filter out any check lines that do not have a value in the subtable's `pr_check_nbr` column that matches the current value of the `pr_check_nbr` column in the parent database table's query result. After applying the filter, the remaining check lines are printed in the subtable.

## Evolution Report Master

### f) Using Parameters from the Input Form in Query Builder

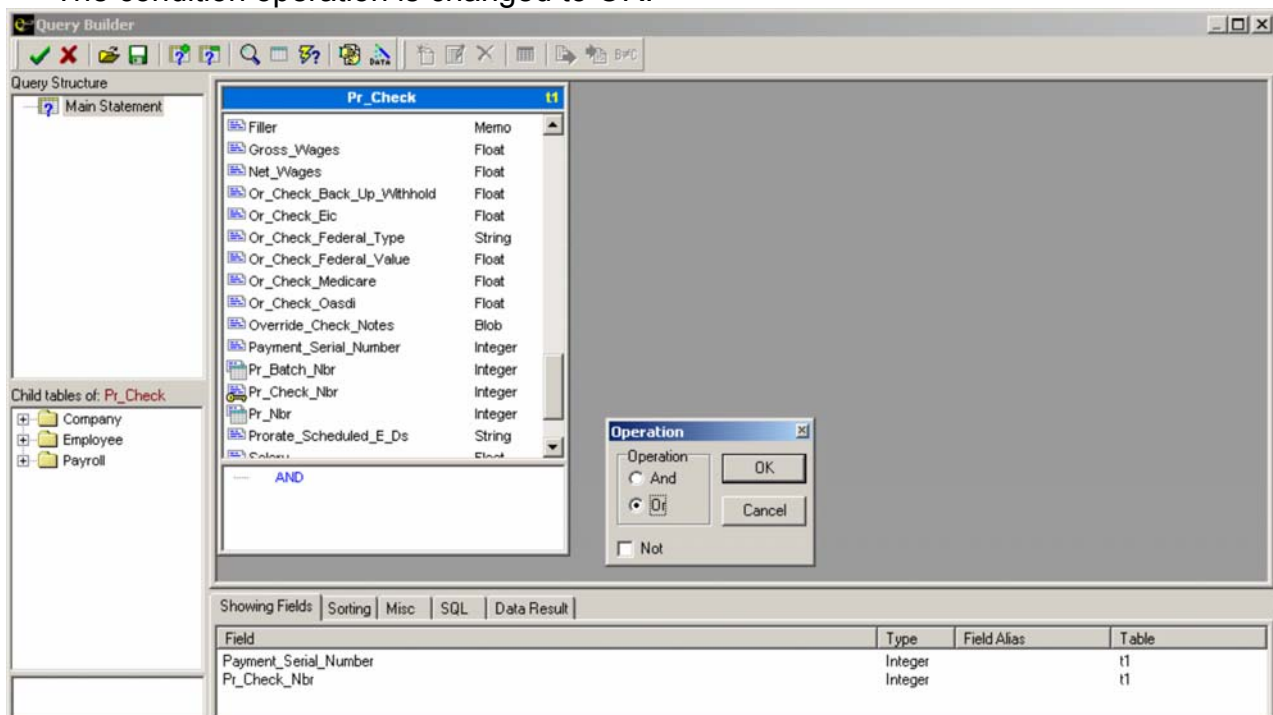
**Parameters** are used in Report Master to store data selected or entered on the input form for use later in the report. Parameters are commonly used in conditions being applied to queries inside database table queries. Parameters are accessible from with Query Builder through Expression Editor. They can be included in either the left or right parts of a condition. When editing either part in Expression Editor, go to the Constants tab and select Parameter in the type dropdown. This will display the Value dropdown. The Value dropdown will include a list of all report parameters. The parameter needed for comparison or calculation should be selected here.

For example, the Payroll Report type comes standard with a Payrolls tabsheet from which payrolls are selected. These payrolls are stored in a parameter as an array of internal payroll numbers (pr\_nbr). This parameter can then be used in a query to select only those payrolls that were selected. It is possible that the parameter is empty if there were no payrolls selected. If the parameter should be used for comparison only if it has data inside (meaning that either the selected payrolls will be returned, or if none were selected, return all payrolls), then one of the two statements must be true in order for a payroll to be included in the query result:

- The value in the payroll table's pr\_nbr column is included in the list of internal payroll numbers in the array parameter
- The internal payroll number array is empty

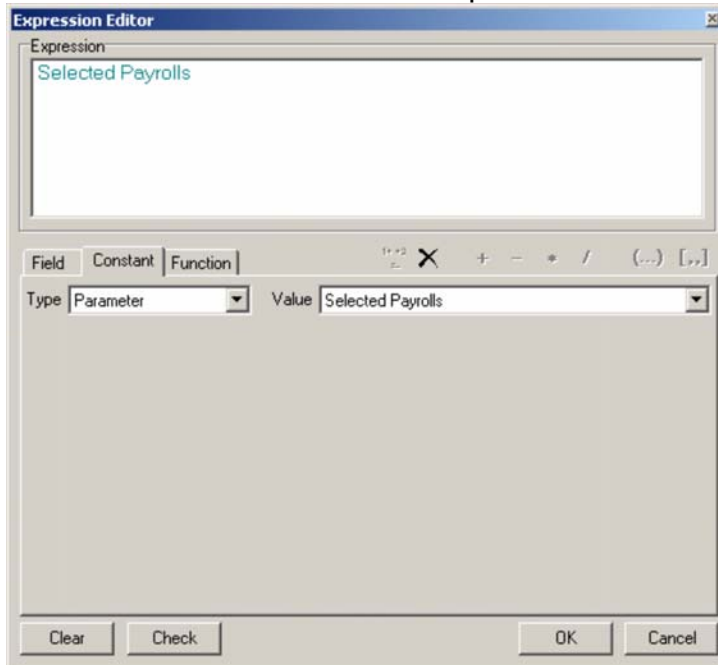
This would be an OR condition in Query Builder. Using the example in the Joins section to build on, the main database table's query would need to be modified in the following way:

- The condition operation is changed to OR.

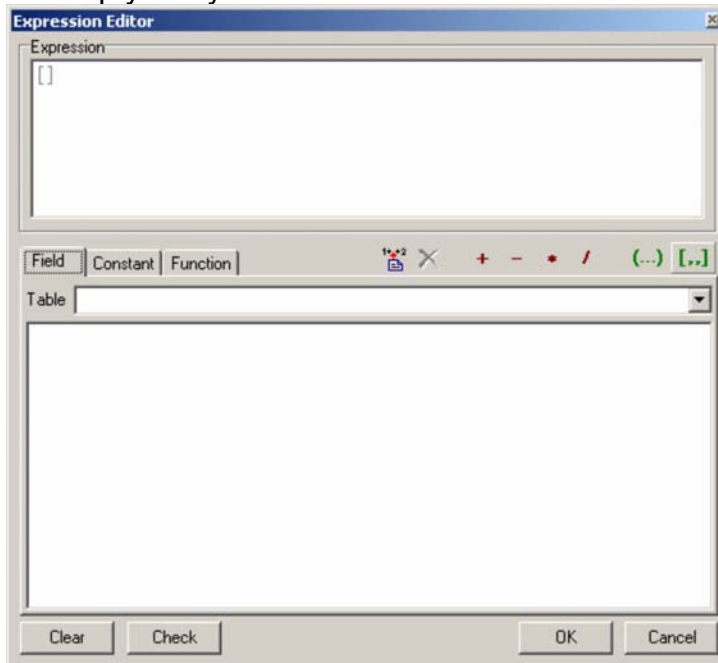


## Evolution Report Master

- A condition is created where the pr\_check table's pr\_nbr column is the left part, '=' is the compare operation and the 'selected payrolls' parameter is the right part. A parameter is assigned as part of an expression by selecting the Parameter type in the dropdown on the Constant tab of the Expression Editor.

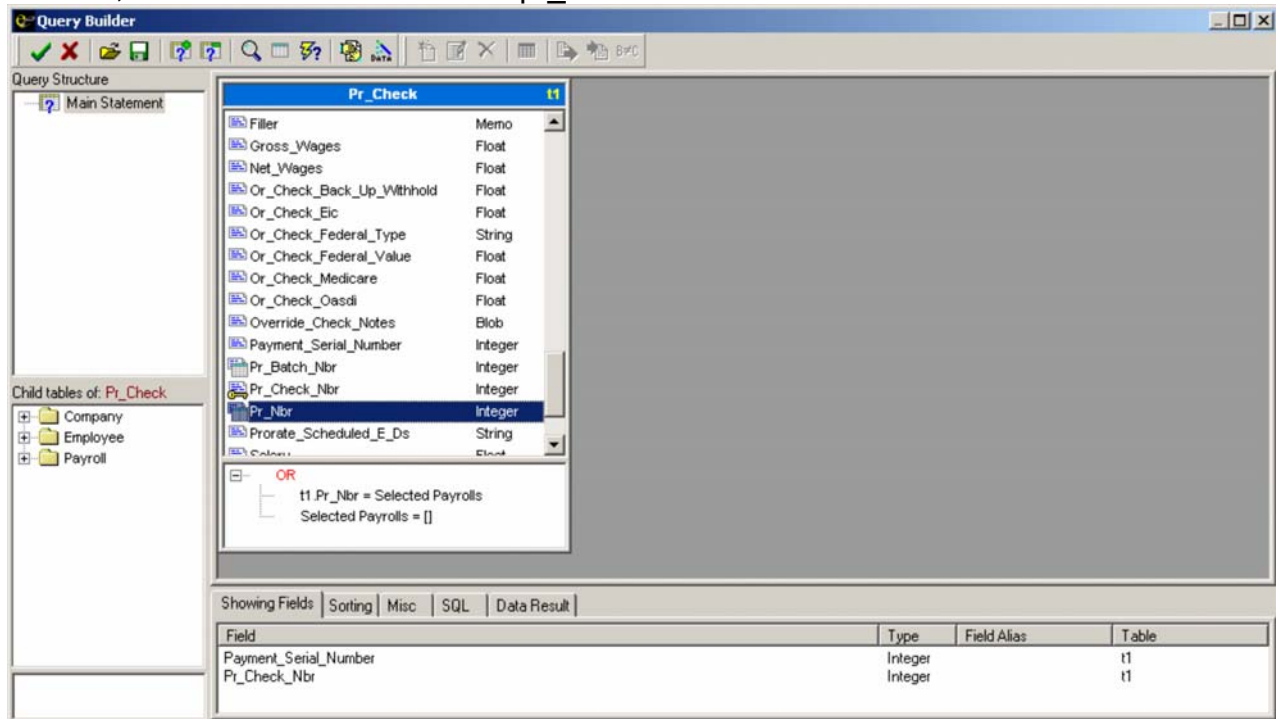


- Another condition is created where the 'selected payrolls' parameter is the left part, '=' is the compare operation and [ ] is the right part, entered by clicking the '[,]' button on the far right in the button panel. [ ] means empty array, so this condition says if no payrolls were selected, return this payroll. This condition will only be true if the parameter is an empty array.



## Evolution Report Master

- When the conditions are complete, they should look like they do in the following screen shot, shown at the bottom of the pr\_check table.



With those conditions created, the main database table's query is filtered by the 'selected payrolls' parameter as defined on the input form. Because of that, only the checks in those payrolls selected will be included in this report, unless no payrolls are selected. In that case, all checks would be reported on.

## Evolution Report Master

### g) Grouping

**Grouping** can be used to create separate database table bands that will print either before or after (or both) a group's detail prints. For example, a query may return a set of rows showing payment serial number, check gross, check line E/D code and check line amount. This result is returned by a query including the pr\_check and pr\_check\_lines tables. The result will include a single row for each check line. This means that if a check has five check lines, that check will be referenced by each of those five rows. Instead of printing the payment serial number once in each instance of the detail band, it would be better and more readable to print the payment serial number in a group header band. Following is how this would be accomplished.

- The main database table's query would be defined as shown below, joining cl\_e\_ds to pr\_check\_lines on cl\_e\_ds\_nbr, and pr\_check\_lines to pr\_check on pr\_check\_nbr.

The screenshot shows the Query Builder interface. The main window displays a query structure with three tables: Pr\_Check (t1), Pr\_Check\_Lines (t2), and Cl\_E\_Ds (t3). The Pr\_Check table is joined to Pr\_Check\_Lines on the field pr\_check\_nbr. Pr\_Check\_Lines is joined to Cl\_E\_Ds on the field cl\_e\_ds\_nbr. The interface also shows a list of fields for the Pr\_Check table, including Active\_Record, Calculate\_Override\_Taxes, Changed\_By, Check\_Comments, Check\_Status, Check\_Type, Check\_Type\_945, Co\_Delivery\_Package\_Nbr, Creation\_Date, Cust\_Pr\_Bank\_Acct\_Number, Ee\_Eic\_Tax, Ee\_Medicare\_Gross\_Wages, Ee\_Medicare\_Tax, Ee\_Medicare\_Taxable\_Wages, and Ee\_Nbr. A filter is applied to the Pr\_Check table: t1.Pr\_Nbr = Selected Payrolls. The bottom section shows a table of fields for the query result.

| Field                  | Type    | Field Alias | Table |
|------------------------|---------|-------------|-------|
| Payment_Serial_Number  | Integer |             | t1    |
| Gross_Wages            | Float   |             | t1    |
| Custom_E_D_Code_Number | String  |             | t3    |
| Amount                 | Float   |             | t2    |

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- With the query defined, open the database table's Object Properties dialog and select the Grouping tab.

The screenshot shows the 'Object Properties - DataBase Table' dialog box with the 'Grouping' tab selected. The dialog has five tabs: General, Grouping, Appearance, Processing, and About. The Grouping tab contains a table with two columns: 'Group Name' and 'Group Fields'. Below the table are input fields for 'Group Name', 'Group Field 1', 'Group Field 2', and 'Group Field 3'. To the right of these fields are buttons: 'Add Group', 'Delete Group', 'Move Up', and 'Move Down'. At the bottom, there are three checkboxes: 'Header Band', 'Footer Band', 'Break Page after this group', 'Disabled Group', and 'Inherited Group'. The 'Close', 'Cancel', and 'Apply' buttons are at the very bottom.

- Click the Add Group button and enter a descriptive group name. Select the query field to group on in the Group Field 1 dropdown. To include the group header band only, the Footer Band check box should be unchecked.

The screenshot shows the same 'Object Properties - DataBase Table' dialog box, but now it is populated. The 'Group Name' field contains the text 'Check'. The 'Group Field 1' dropdown menu is set to 'Payment Serial Number'. The 'Header Band' checkbox is checked, while the 'Footer Band' checkbox is unchecked. The other checkboxes ('Break Page after this group', 'Disabled Group', 'Inherited Group') remain unchecked. The 'Add Group', 'Delete Group', 'Move Up', and 'Move Down' buttons are still present. The 'Close', 'Cancel', and 'Apply' buttons are at the bottom.

## Evolution Report Master

- Split the group header band into two columns. Set up the first cell in the group header band to print the payment serial number value in the cell's Object Properties dialog.

The dialog box is titled "Object Properties - DataBase Table Cell". It has five tabs: "General", "Appearance", "Border Lines", "Processing", and "About". The "General" tab is selected. It contains the following fields and controls:

- Object Name:** A text box containing "C2".
- Brief Description:** A text box containing "Cell".
- Cell Content:** A section with a row of buttons: "Empty", "Text", "Number", "Date", "Field", and "Calc". The "Field" button is selected.
- Field:** A dropdown menu showing "Payment Serial Number".
- Format:** A dropdown menu that is currently empty.

At the bottom of the dialog are three buttons: "Close", "Cancel", and "Apply".

- Set up the second cell in the group header band to print the check gross.

The dialog box is titled "Object Properties - DataBase Table Cell". It has five tabs: "General", "Appearance", "Border Lines", "Processing", and "About". The "General" tab is selected. It contains the following fields and controls:

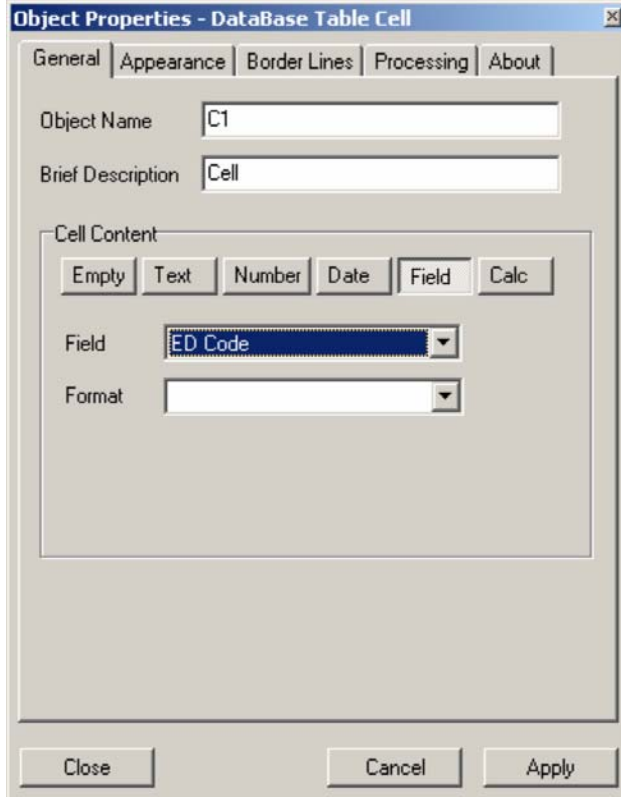
- Object Name:** A text box containing "C4".
- Brief Description:** A text box containing "Cell".
- Cell Content:** A section with a row of buttons: "Empty", "Text", "Number", "Date", "Field", and "Calc". The "Field" button is selected.
- Field:** A dropdown menu showing "Gross Wages".
- Format:** A dropdown menu showing "#,##0.00".

At the bottom of the dialog are three buttons: "Close", "Cancel", and "Apply".



## Evolution Report Master

- Split the detail band into two cells. Set up the first cell to print the E/D code.

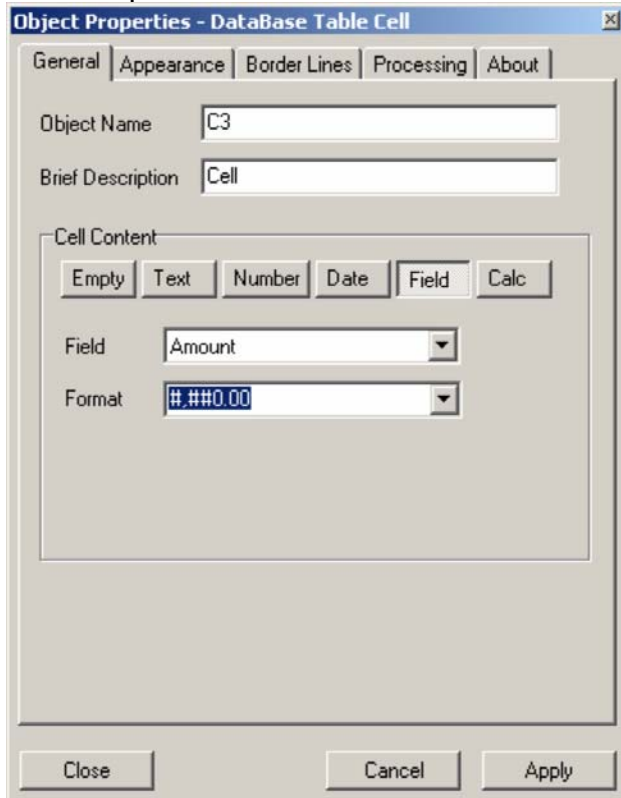


The dialog box is titled "Object Properties - DataBase Table Cell". It has five tabs: "General", "Appearance", "Border Lines", "Processing", and "About". The "General" tab is selected. It contains the following fields and controls:

- Object Name:** A text box containing "C1".
- Brief Description:** A text box containing "Cell".
- Cell Content:** A section with a group box containing several buttons: "Empty", "Text", "Number", "Date", "Field", and "Calc". The "Field" button is selected.
- Field:** A dropdown menu showing "ED Code".
- Format:** A dropdown menu that is currently empty.

At the bottom of the dialog are three buttons: "Close", "Cancel", and "Apply".

- Set up the second cell in the detail band to print the check line amount.



The dialog box is titled "Object Properties - DataBase Table Cell". It has five tabs: "General", "Appearance", "Border Lines", "Processing", and "About". The "General" tab is selected. It contains the following fields and controls:

- Object Name:** A text box containing "C3".
- Brief Description:** A text box containing "Cell".
- Cell Content:** A section with a group box containing several buttons: "Empty", "Text", "Number", "Date", "Field", and "Calc". The "Field" button is selected.
- Field:** A dropdown menu showing "Amount".
- Format:** A dropdown menu showing "#,##0.00".

At the bottom of the dialog are three buttons: "Close", "Cancel", and "Apply".

## Evolution Report Master

After completing these steps, the report should look similar to this:

The screenshot shows the 'Report Master' application window. The interface includes a menu bar (File, Edit, View, Windows), a toolbar with various icons, and a status bar at the bottom showing 'C3 (Cell)'. On the left side, there is a vertical toolbar with 'InputForm' and 'PrintForm' buttons. The main workspace is a grid where a report layout is being designed. The layout includes a header section with 'Company Name' and 'Report Name', followed by a section for 'Consolidation On/Off' with fields for 'Check Date', 'Period Range', and 'Week Number'. Below this is a table with two columns: '[Payment Serial Number]' and '[Gross Wages]'. The table has a 'Detail Band' and a 'DBTable1' label. The status bar at the bottom indicates 'C3 (Cell)'.

| Company Name            |               | Report Name    |  |
|-------------------------|---------------|----------------|--|
| Consolidation On/Off    |               | Check Date :   |  |
|                         |               | Period Range : |  |
|                         |               | Week Number :  |  |
| [Payment Serial Number] | [Gross Wages] |                |  |
| [ED Code]               | [Amount]      |                |  |

Grouping on multiple fields may be done as well. This would create a group for each unique combination of the fields being grouped on in Group Field 1, Group Field 2 and Group Field 3. The same steps would be followed, except one or both of the other two Group Fields would be defined.

Multiple groups may be defined, creating groups within groups. For example, the above example may be grouped on payroll check date and run number, or maybe by employee. This would require the appropriate tables and fields to be included in the query.

### ***F. Single-Company Report Walkthrough***

#### **1. Single-table report that lists payroll, employee and check number**

This report will include a report header band, page header band, group header band, detail band, group footer band, report summary band and page footer band.

- Report Type
  - Payroll Report
- Input Form
  - Misc Settings tab → Employees tab
  - Add DB Grid with Query
    - Client alignment
    - Define query selecting data to show on grid using the Employee Basic template
      - Ee\_nbr
      - Custom\_employee\_code
      - Full\_Name
      - Social\_Security\_Number
    - Create parameter that contains list of selected employees for use on print form
      - Key field is ee\_nbr
- Print Form
  - Add DB Table
    - Client alignment
    - Define query selecting data to report, using selected employees parameter from input form
      - Check\_date
      - Run\_number
      - Payment\_serial\_number
      - Full\_name (last\_name + ' ' + first\_name + ' ' + middle\_initial)
      - Custom\_employee\_number
      - Sort on check\_date, run\_number, payment\_serial\_number
    - Define detail band
      - Payment\_serial\_number
      - Custom\_employee\_number
      - Full\_name
    - Create and define payroll group header and footer bands
      - Payroll header band
        - Calculated cell ('Payroll: ' + AsString(check\_date) + ' - ' + AsString(run\_number))
      - Payroll footer band
        - Static text ('Payroll Check Count')
        - Count of checks in the payroll group
    - Define report total band
      - Static text ('Report Check Count')
      - Aggregate sum of check count from payroll footer band

### 2. Multi-table report that lists payroll, employee and check number with earning and deduction detail.

This report will be similar to the one created in the prior section. Additionally, it will include a check group header band and two subtables (one for earnings and one for deductions) each of which will include table header and total bands.

- Report Type
  - Payroll Report
- Input Form
  - Misc Settings tab → Employees tab
  - Add DB Grid with Query
    - Client alignment
    - Define query selecting data to show on grid using the Employee Basic template
      - Ee\_nbr
      - Custom\_employee\_code
      - Full\_Name
      - Social\_Security\_Number
    - Create parameter that contains list of selected employees for use on print form
      - Key field is ee\_nbr
- Print Form
  - Add DB Table
    - Client alignment
    - Define query selecting data to report, using selected employees parameter from input form
      - Check\_date
      - Run\_number
      - Payment\_serial\_number
      - Pr\_check\_nbr
      - Full\_name (last\_name + ' ' + first\_name + ' ' + middle\_initial)
      - Custom\_employee\_number
    - Create and define check group header band
      - Payment\_serial\_number
      - Custom\_employee\_number
      - Full\_name
    - Define detail band
      - Split into two evenly sized cells
      - Create subtable in each cell
      - Define query for each subtable selecting from pr\_check\_lines, Master-detail join on pr\_check\_nbr
        - Pr\_check\_nbr
        - Custom\_e\_d\_code\_number
        - Amount
        - Define one query to find all earnings, and the other to find all deductions, basing both conditions on code type

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- Add table header and total bands to each subtable
  - The header bands will show the static text 'Earnings' or 'Deductions' depending on what is returned by that subtable's query
- Split each detail band into two cells
  - Custom\_e\_d\_code\_number
  - Amount
- Split each total band into two cells
  - Static text 'Total:'
  - Aggregate sum of amount from subtable detail band
- Create and define payroll group header and footer bands
  - Payroll header band
    - Calculated cell ('Payroll: ' + AsString(check\_date) + ' - ' + AsString(run\_number))
  - Payroll footer band
    - Split into 2 rows
    - Row 1
      - Static text ('Payroll Earnings Total:')
      - Aggregate sum of earnings total from subtable total band
      - Static text ('Payroll Deductions Total:')
      - Aggregate sum of deduction total from subtable total band
    - Row 2
      - Static text ('Payroll Check Count')
      - Count of payment serial number from check header band
- Define report total band
  - Split into 2 rows
  - Row 1
    - Static text ('Report Earnings Total:')
    - Aggregate sum of earnings total from payroll footer band
    - Static text ('Report Deductions Total:')
    - Aggregate sum of deduction total from payroll footer band
  - Row 2
    - Static text ('Report Check Count')
    - Aggregate sum of check count from payroll footer band

### **G. Multi-Company Report Walkthrough**

#### **1. Single-table report that lists company, state and SUI description.**

This report will be similar to the one created in the prior section. Additionally, it will include two subtables. One will show employee SUIs. The other will show employer SUIs.

In the case of multi-company reports, the report will always need to begin with a master table used to select and loop through the list of companies selected on the input form. Inside that master table should be a subtable used to get report detail for each company. To ensure that only data for the company selected is returned, one of two things must be done:

- The subtable must be joined with the master table via a master-detail join on company number.
- A condition must be created in the subtable query looking for data where the internal company number is equal to the parameter called Company (Internal #).

Keeping that in mind, following is an outline of how to put this report together:

- Report Type
  - MC Report by Period with Table
- Input Form
  - Add new page on tab control → States
    - Add DB grid with query for state selection
    - Client alignment
    - Define query selecting state data from the sy\_states table in the system database
      - Sy\_states\_nbr
      - State
      - Name
    - Create parameter that contains list of selected states for use on print form
      - Key field is sy\_states\_nbr
- Print Form
  - Open query in Selected Companies master table
    - Add conditions and a join to filter out companies that do not have a selected state set up
      - Add sy\_states and tmp\_co\_states tables
      - Join sy\_states\_nbr to tmp\_co\_states on state field in both tables
      - Add OR condition...
        - Sy\_states\_nbr = Selected States
        - Selected states = []
      - Check the distinct check box to only return one record per company
    - Define showing fields, all from tmp\_co
      - Custom\_company\_number
      - Name
      - Co\_nbr if using the join method of filtering described above
    - Create and define company group header on master table

## Evolution Report Master

- Co\_custom\_nbr
  - Co\_name
- Add subtable to preexisting Selected Companies DB table
  - Define query selecting data to report, using selected states parameter from input form, as well as one of the two methods described above to ensure that the query will return data for only one company
    - State
    - State\_ein
    - SUI\_ein
    - SUI\_tax\_name
    - Description
  - Add OR condition on co\_states and sy\_sui...
    - Sy\_states\_nbr = Selected States
    - Selected states = []
  - Create and define state group header
    - State
    - State\_ein
    - SUI\_ein
  - Create SUI group for sorting only – no header or footer bands
  - Define detail band
    - SUI\_tax\_name
    - Description
  - Define report total band
    - Static text ('Report Check Count')
    - Aggregate sum of check count from payroll footer band

### 2. Multi-table report that lists company, state and SUI description, with employee and employer SUIs listed separately.

In the case of multi-company reports, the report will always need to begin with a master table used to select and loop through the list of companies selected on the input form. Inside that master table should be a subtable used to get report detail for each company. To ensure that only data for the company selected is returned, one of two things must be done:

- The subtable must be joined with the master table via a master-detail join on company number.
- A condition must be created in the subtable query looking for data where the internal company number is equal to the parameter called Company (Internal #).

Keeping that in mind, following is an outline of how to put this report together:

- Report Type
  - MC Report by Period with Table
- Input Form
  - Add new page on tab control → States
    - Add DB grid with query for state selection
    - Client alignment
    - Define query selecting state data from the sy\_states table in the system database
      - Sy\_states\_nbr
      - State
      - Name
    - Create parameter that contains list of selected states for use on print form
      - Key field is sy\_states\_nbr
- Print Form
  - Open query in Selected Companies master table
    - Add conditions and a join to filter out companies that do not have a selected state set up
      - Add sy\_states and tmp\_co\_states tables
      - Join sy\_states\_nbr to tmp\_co\_states on state field in both tables
      - Add OR condition...
        - Sy\_states\_nbr = Selected States
        - Selected states = []
      - Check the distinct check box to only return one record per company
    - Define showing fields, all from tmp\_co
      - Custom\_company\_number
      - Name
      - Co\_nbr if using the join method of filtering described above
    - Create and define company group header on master table
      - Co\_custom\_nbr
      - Co\_name
  - Add subtable to preexisting Selected Companies DB table



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- Define query selecting data to report, using selected states parameter from input form, as well as one of the two methods described above to ensure that the query will return data for only one company
  - State
  - State\_ein
  - SUI\_ein
  - SUI\_tax\_name
  - Description
- Add OR condition on co\_states and sy\_sui...
  - Sy\_states\_nbr = Selected States
  - Selected states = []
- Create and define state group header
  - State
  - State\_ein
  - SUI\_ein
- Create SUI group for sorting only – no header or footer bands
- Define detail band
  - SUI\_tax\_name
  - Description
- Define report total band
  - Static text ('Report Check Count')
  - Aggregate sum of check count from payroll footer band