

SSRS REPORTING

Lab Guide

SSRS is a powerful tool for custom reporting. Learn how to enhance your SSRS reports related to New World ERP.

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Table of Contents

<i>INTRODUCTION</i>	2
<i>REPORT BUILDER</i>	2
<i>REPORT BUILDER VERSUS VISUAL STUDIO</i>	2
<i>ASSUMPTIONS</i>	2
<i>OBJECTIVES</i>	3
<i>EXERCISE – CREATE AN EMPLOYEE INFORMATION REPORT</i>	4
Requirements	4
Start Report Builder.....	4
Create the Data Source	6
Create the Dataset.....	7
Select the Data and Prepare the Body	8
Add an Image	11
Building Expressions	15
Merging Cells.....	16
Interactive Sorting.....	18
Filtering.....	19
Creating Parameters	20
List Parameters Using Database Values.....	23
Default Parameters	26
Link to New World ERP	32
Expand/Collapse All.....	34
<i>EXERCISE – UPDATE AN EXISTING REPORT TO ALLOW DATA ENTRY</i>	40
Free Form Entry	40
<i>APPENDIX</i>	46
Data Sources	46
SSRS Report Services URL.....	47
SSRS Report Services URL (Named Instances of SQL).....	47
Direct Links to Custom Reports	48
Query Designer	48



INTRODUCTION

Welcome to the New World ERP SSRS Lab. New World ERP uses Microsoft® SQL Server Reporting Services (SSRS) as the primary technology for generating standard reports and forms. The SSRS toolset provides a streamlined means of report creation and customization, as well as a simplified method of report deployment. In this lab, we will explore the possibilities available with SSRS, and provide you with the basics to create and enhance reports for your own organization.

REPORT BUILDER

Microsoft® Report Builder is a report authoring tool that features a Microsoft® Office-like environment with an array of useful report objects such as tables, charts, and text boxes. This application is a free download and only requires rights to your SQL Server Reporting Services and read access to a database. In this session, we will be utilizing Report Builder Version 15.0.20073.0.

REPORT BUILDER VERSUS VISUAL STUDIO

This lab will utilize Microsoft® Report Builder for all exercises. While Microsoft® Visual Studio can be used to produce the same results, it is geared more towards software developers rather than business analysts. Visual Studio includes additional features such as integration with source control systems, IntelliSense for report expressions, and the ability to develop and utilize custom functions within the report.

ASSUMPTIONS

Attendees are expected to have a prior experience maintaining SSRS reports and SQL queries.

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OBJECTIVES

After completing this lab, you will be familiar with...

- Images
- Interactive sorting
- Expressions
- Merging cells
- Filtering
- Parameters
- Hyperlinks

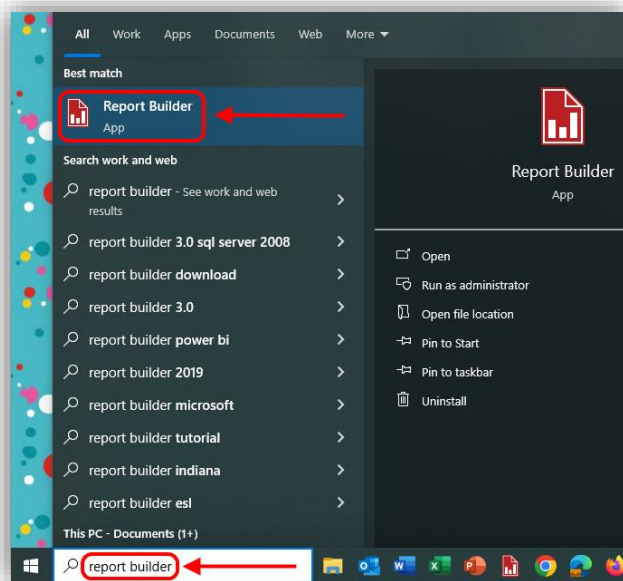
EXERCISE – CREATE AN EMPLOYEE INFORMATION REPORT

Requirements

- Report Builder installed on the client machine
- Rights to access SQL Server Reporting Services where New World ERP is installed
- Read-only access to the New World ERP database

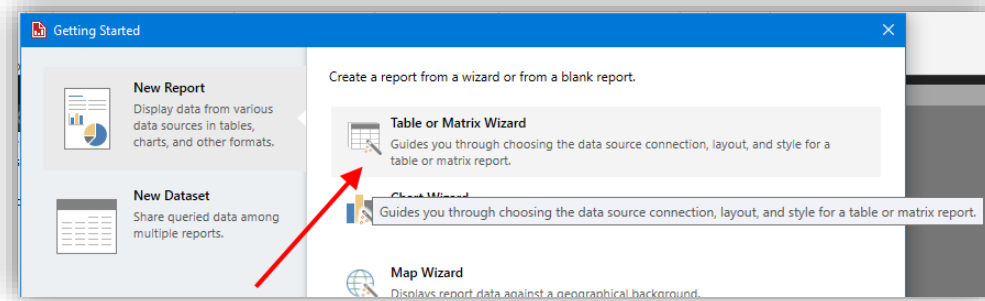
Start Report Builder

1. Start by running Report Builder
 - a. Click into the search field next to the Start menu in the lower left corner of the screen
 - b. Type “**report builder**” into the search field
 - c. Click the *Report Builder* App to open it

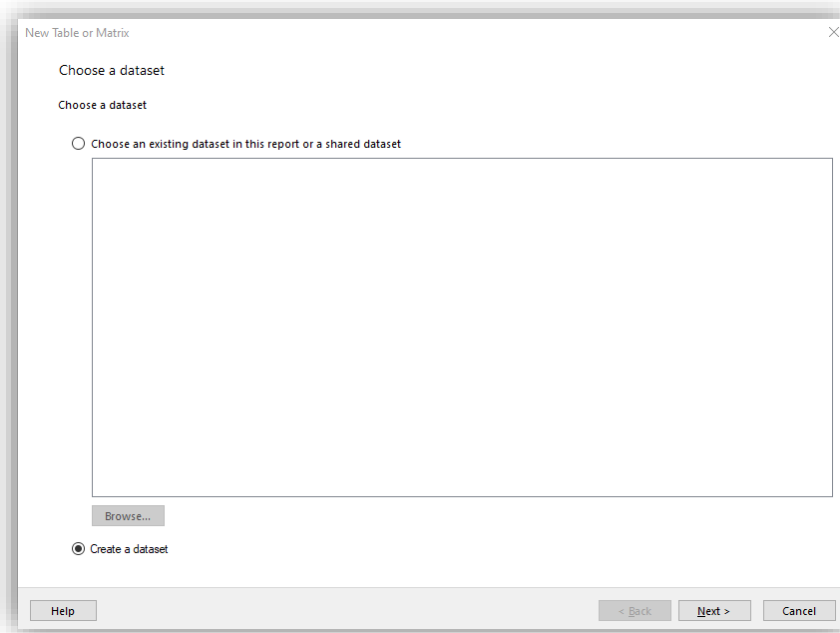


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2. In the Getting Started window, select *New Report > Table or Matrix Wizard*



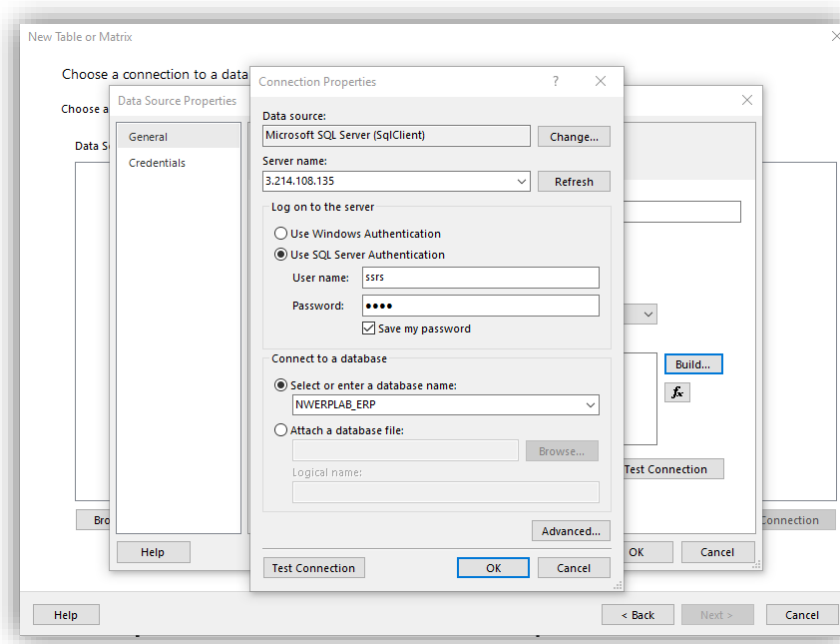
3. When prompted to *Choose a Dataset*, select *Create a Dataset* and click **<Next>**



Create the Data Source

The Data Source is the connection to the database will be used for report data.

1. In the *Choose a Connection to the Data Source* window, click the **<New>** button to create a new data source
 - a. Enter **NWERP** in the *Name* field
 - b. Click the **<Build>** button to configure the DB connection



- i. *Server name: 3.214.108.135*
 - ii. *Use SQL Server Authentication with*
 1. *User name: ssrs*
 2. *Password: ssrs*
 - iii. *Check Save my password*
 - iv. *Select or enter a database name: NWERPLAB_ERP*
 - v. *Click <OK> to close the Connection Properties popup*
 - c. *Click <OK> to close the Data Source Properties window*
 2. From the *Connection to the Data Source* window, confirm your **NWERP** data source is selected and click the **<Next>** button

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It is also possible to connect to an existing NWERP Data Source used by your standard NWERP reports, rather than creating a new database connection in every SSRS report. For additional details, please refer to the Appendix.

Create the Dataset

The Dataset contains the rows and columns of data that will be displayed in the report. In our example we will be retrieving several employee-related fields.

1. Click the **<Edit as Text>** button at the top of the *Design a Query* window
2. Locate the **1-EmployeeInfoDataSet.txt** file in the Windows **Desktop > SSRS** folder and double-click to open it in Notepad
 - a. Highlight all of the text (**Ctrl + A**) and Copy it (**Ctrl + C**) to your clipboard
 - b. In the Report Builder *Design a Query* window, Paste the text (**Ctrl + V**) into the blank text field below the header

```
DECLARE @AsOfDate DATETIME
SET @AsOfDate = GETDATE()

SELECT EI.EmployeeID,
       EI.EmployeeNumber,
       EI.EmployeeName,
       EN.FirstName,
       EN.MiddleName,
```

3. Click the Run icon to confirm that your query returns data

EmployeeID	EmployeeNumber	EmployeeName	FirstName	MiddleName	LastName	NameSuffix	EmpID
428	437	Billigmeier, Sky...	Skylar	A	Billigmeier		R
429	438	Mckellip, Lizzy A	Lizty	A	Mckellip		R
430	439	Duncker, Mikel P	Mikel	P	Duncker		R
431	440	Thorngren, Phi...	Phillip	J	Thorngren		R
432	441	Vanbramer, Lat...	Latrell	D	Vanbramer		R
433	442	Nicol, Aisha C	Aisha	C	Nicol		R
434	443	Renno, Sheila D	Sheila	D	Renno		R
435	444	Maccallum, Ny...	Nya	P	Maccallum		R
436	445	Ebersold, Dak...	Dakota		Ebersold		R
437	446	Tresvant, Lilian...	Liliana	F	Tresvant		R

4. Click **<Next>**



Select the Data and Prepare the Body

1. From the *Arrange Fields* window


a. Drag the following fields to the *Values* box

i. **EmployeeName**

ii. **EmployeeNumber**

1. The **EmployeeNumber** field will be prefaced with the word “**Sum**” (i.e. **Sum(EmployeeNumber)**)

a. Click the field to highlight it


b. Click the down arrow  to the right of the field name and click **Sum** to deselect it

iii. **EmployeeType**

iv. **PositionNumber**

1. The **PositionNumber** field will be prefaced with the word “**Sum**” (i.e. **Sum(PositionNumber)**)

a. Click the field to highlight it

b. Click the down arrow  to the right of the field name and click **Sum** to deselect it

v. **PositionTitle**

vi. **BenefitGroup**

b. Drag the following fields to the Row groups box

i. **Department**

c. When complete, it should look like this

The screenshot shows a configuration window with three main sections:

- Column groups:** An empty box for defining column-level groupings.
- Row groups:** A list containing "Department".
- Σ Values:** A list of fields with dropdown arrows: EmployeeName, EmployeeNumber, EmployeeType, PositionNumber, PositionTitle, and BenefitGroup.

At the bottom, there are navigation buttons: "< Back" and "Next >".

d. Click **<Next>**

2. From the *Choose the layout* window

- a. Check *Show subtotal and grand totals*
 - i. Select *Stepped, subtotal above*
- b. Check *Expand/collapse groups*

The screenshot shows the "Choose the layout" window with the following options:

- Show subtotals and grand totals
 - Blocked, subtotal below
 - Blocked, subtotal above
 - Stepped, subtotal above
- Expand/collapse groups

A preview table is shown on the right:

Department	Employee N	Employee N	Employee Ty	Position Nu	Position Tit	Benefit Gro
[Department]		[Sum(Employee		[Sum(Position]		
	[EmployeeNam	[EmployeeNum	[EmployeeType	[Pos itionNumbe	[Pos itionTitle	[BenefitGroup]
Total		[Sum(Employee		[Sum(Position]		


3. Click **<Next>**

4. Click **<Finish>**

Click to add title						
Department	Employee N	Employee N	Employee Ty	Position Nu	Position Titl	Benefit Grou
[Department]		[Sum(Employee		[Sum(PositionNi		
	[EmployeeNam	[EmployeeNum	[EmployeeType	[PositionNumbe	[PositionTitle]	[BenefitGroup]
Total		[Sum(Employee		[Sum(Position]		
						[&ExecutionTime]

5. Delete all the **Sum** fields and the **"Total"** text from the group header and footer by clicking on the cell and pressing the **<Delete>** key on your keyboard


Click to add title						
Department	Employee N	Employee N	Employee Ty	Position Nu	Position Titl	Benefit Grou
[Department]						
	[EmployeeNam	[EmployeeNum	[EmployeeType	[PositionNumbe	[PositionTitle]	[BenefitGroup]



Run

--- PREVIEW BREAK ---

Click the **Run** icon to preview your report – Click **Design** when finished.

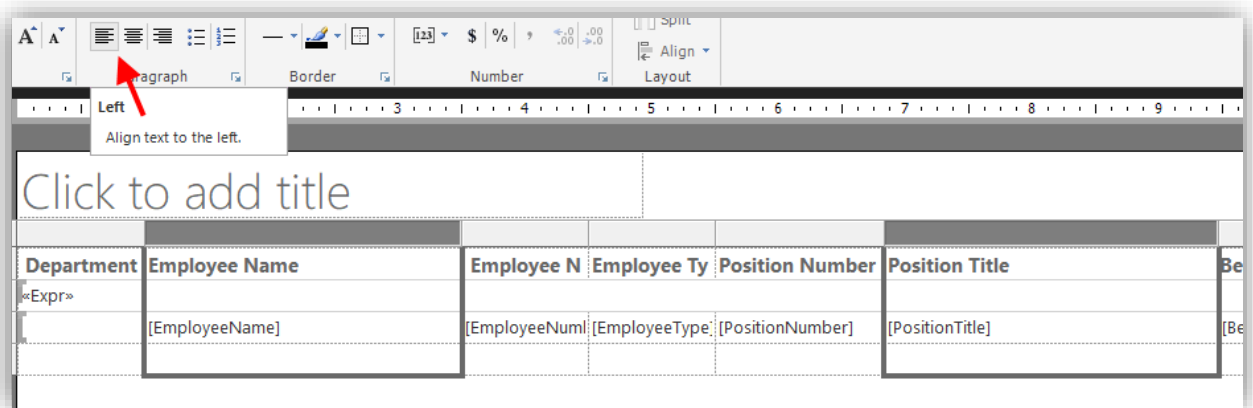


Design

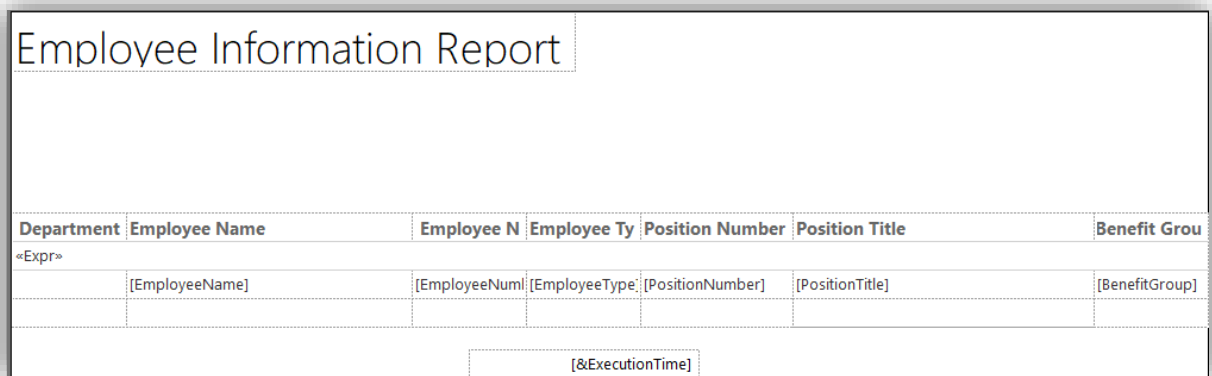
Department	Employee Name	Employee Number	Employee Type	Position Number	Position Title	Benefit Group
001	Neyra, Adonis V	74	PP			5
	Werner, Zackery W	121	TP			5
	Adelblue, Julie G	181	TF			5
	Cutrell, Keith	186	EO	1059005	Council Person	5C

Add an Image

1. Resize the report to allow room for a logo and make it more readable
 - a. Widen the **Employee Name** and **Position Title** columns so that the data printed will be more likely to fit on one line
 - b. Select the **Employee Name** and **Position Title** columns, then click the Left align button to align the text in both columns to the left

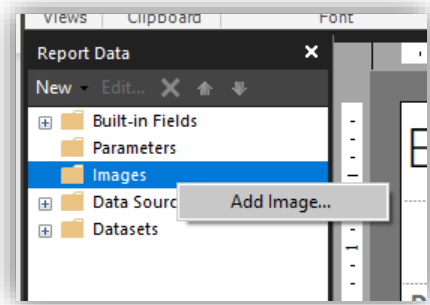


- c. Move the tablix down to make more room
- d. Add the title "***Employee Information Report***" and shrink the width of its text box

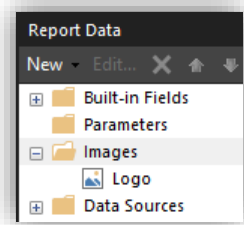


CONNECT 24

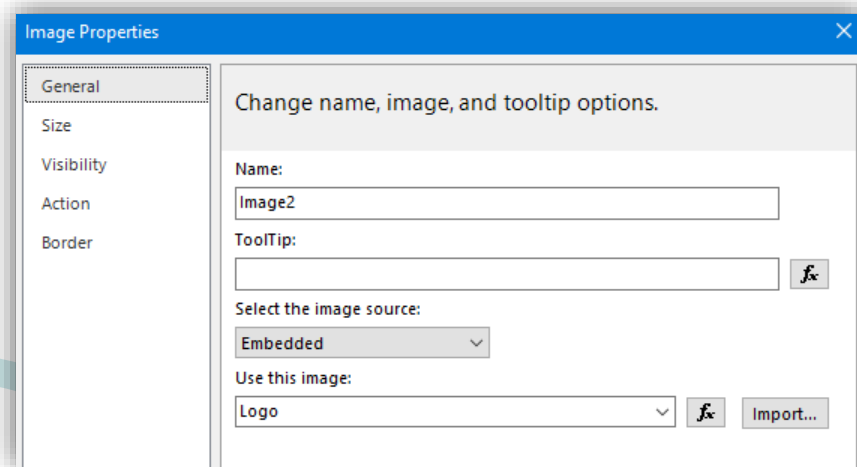
2. In the *Report Data* tray on the left, right-click *Images*, then select *Add Image*



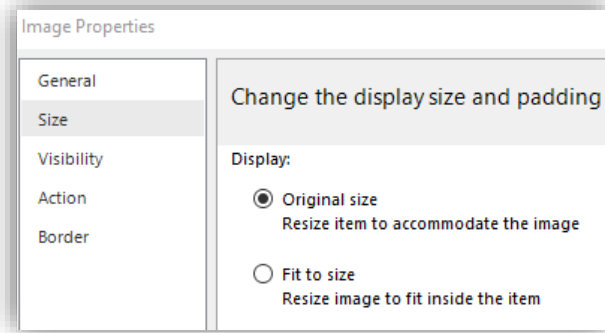
3. Browse to the **Logo.jpg** file in the Windows **Desktop > SSRS** folder and double-click it to open bring it into the report



4. Drag the **Logo** onto your report in the upper right-hand corner and an *Image Properties* window will appear



5. Select the *Size* tab on the left side of the *Image Properties* window
 - a. Under *Display*, select *Original size*



6. Click **<OK>**
7. Move the tablix down more if the logo overlaps it

Department	Employee Name	Employee N	Employee Ty	Position Number	Position Title	Benefit Grou
<Expr>	[EmployeeName]	[EmployeeNum]	[EmployeeType]	[PositionNumber]	[PositionTitle]	[BenefitGroup]

--- PREVIEW BREAK ---

Click the **Run** icon to preview your report – Click **Design** when finished.

Employee Information Report

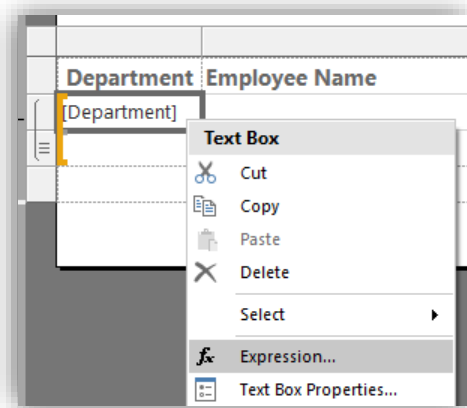


CityCounty
an integrated community

Department	Employee Name	Employee Number	Employee Type	Position Number	Position Title	Benefit Group
001	Neyra, Adonis V	74	PP			5
	Werner, Zackery W	121	TP			5
	Adelblue, Julie G	181	TF			5
	Cutrell, Keith	186	EO	1059005	Council Person	5C
	Wiener, Kourtney A	211	TP			5

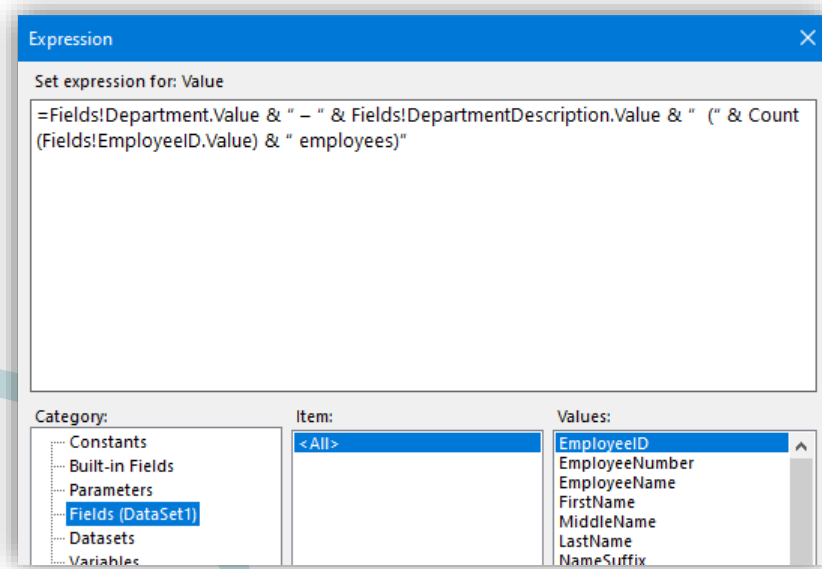
Building Expressions

1. Right-click on the **Department** text box in the group header and select *Expression*



- a. You should see **=Fields!Department.Value**
- b. Change it to the following
=Fields!Department.Value & " – " & Fields!DepartmentDescription.Value & " (" & Count(Fields!EmployeeID.Value) & " employees)"

*NOTE: you can copy this text from the file **2-DepartmentExpression.txt** located in the Windows Desktop > SSRS folder*

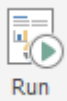
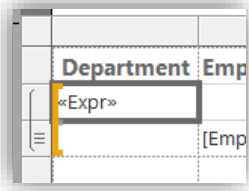


CONNECT 24



A shortcut to typing out the field names in expressions is to select *Fields* in the *Category* window, then double-click the column name in the *Values* window.

- c. Click **<OK>**
2. You should notice that the cell previous with **[Department]** in it now shows as **«Expr»**



--- PREVIEW BREAK ---

Click the **Run** icon to preview your report – Click **Design** when finished.



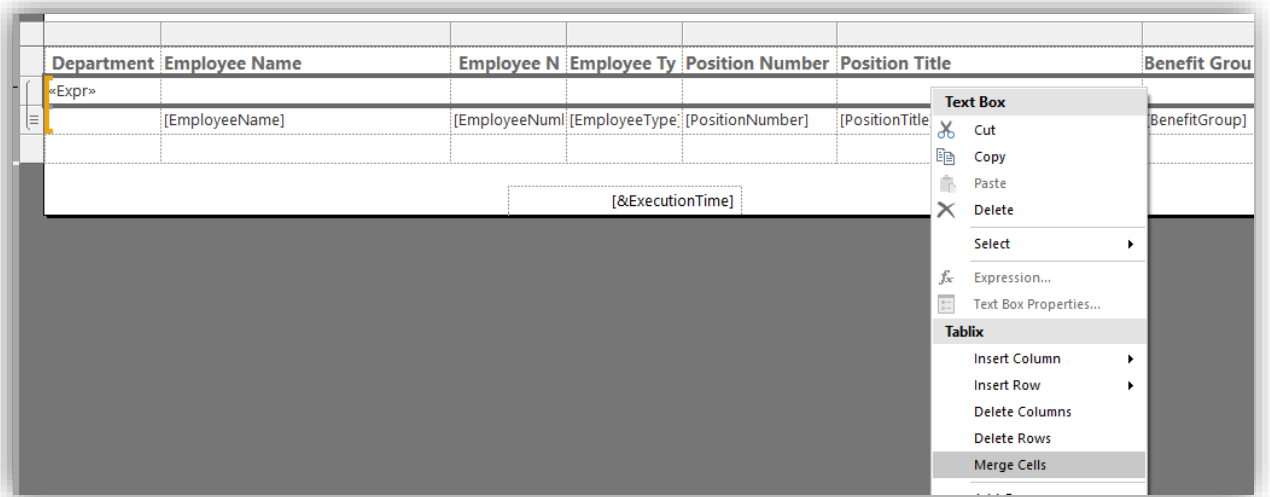
Department	Employee Name	Employee Number	Employee Type
001 – Council (59 employees)			
	Neyra, Adonis V	74	PP
	Werner, Zackery W	121	TP
	Adelblue, Julie G	181	TF


Merging Cells

Notice above now that you added the Department Description, the cell wraps and looks odd

1. Click the new **Department** cell with the **«Expr»** in it within the group header
2. Hold the **<Shift>** key down on your keyboard
3. Click the cell in the last column of the report that is in the same row (all cells in that row should now be selected)

- Right-click somewhere within the selected cells and select *Merge Cells*






Run

--- PREVIEW BREAK ---

Click the **Run** icon to preview your report – Click **Design** when finished.



Design

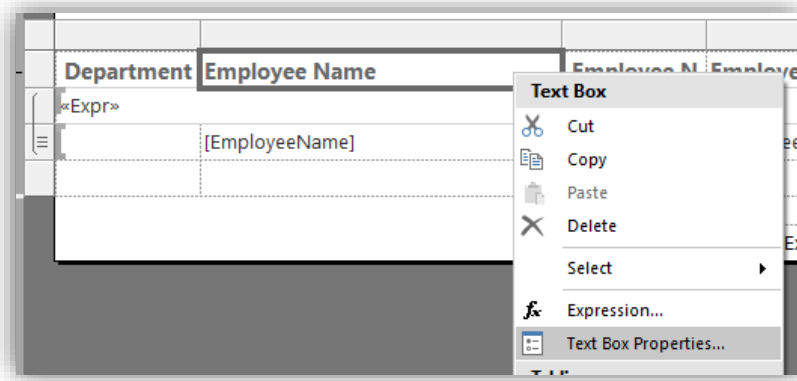
- Notice the **Department** no longer wraps

Department	Employee Name	E
001 – Council (59 employees)		
002 – Clerk of Council (10 employees)		
010 – Information Technology (10 employees)		
011 – Mayor's Office (21 employees)		
012 – City Sealer (3 employees)		
020 – Auditor's Office (49 employees)		
030 – Treasurer's Office (9 employees)		

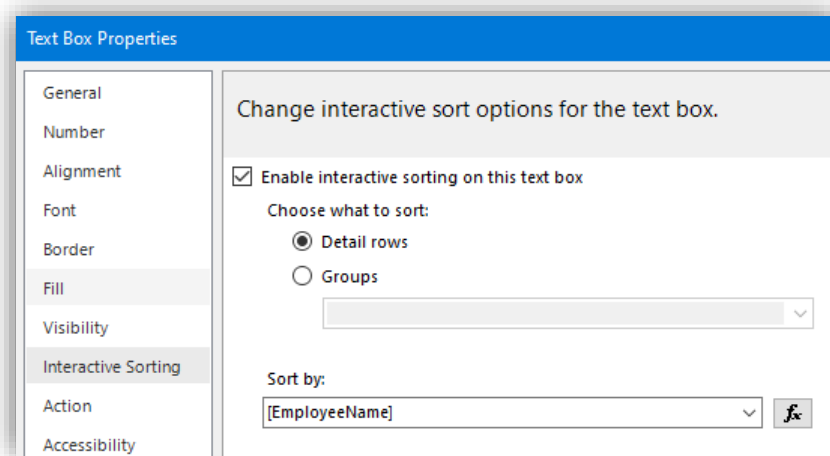
- Conversely, you can right-click on a merged cell and select *Split Cells* to “un-merge” the cells

Interactive Sorting

1. Right-click the column header named **Employee Name** and select *Textbox Properties*



2. Select the *Interactive Sorting* tab on the left in the *Text Box Properties* windows
 - a. Check *Enable interactive sorting on this text box*
 - b. *Sort by:* **[EmployeeName]**



3. Click **<OK>**


--- PREVIEW BREAK ---

Click the **Run** icon to preview your report – Click **Design** when finished.

Run Design

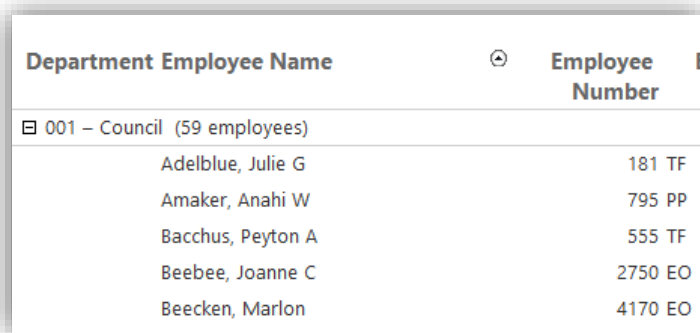
CONNECT 24

- You will notice the **Employee Name** column has an up and down arrow on it now



Department Employee Name	Employee Number
001 – Council (59 employees)	
002 – Clerk of Council (10 employees)	

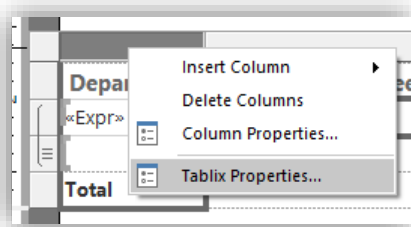
- Click that arrow to sort the report by **Employee Name** within each department group



Department Employee Name	Employee Name	Employee Number	Employee Status
001 – Council (59 employees)			
	Adelblue, Julie G	181	TF
	Amaker, Anahi W	795	PP
	Bacchus, Peyton A	555	TF
	Beebee, Joanne C	2750	EO
	Beecken, Marlon	4170	EO

Filtering

- Click anywhere on the table and right-click any gray edge of the tablix and select **Tablix Properties**



- Select the *Filters* tab on the left side of the *Tablix Properties* window
- Click **<Add>**
 - Expression* = **[EmployeeStatus]**
 - Operator* “=”
 - Value* = **A**
- Click **<OK>**

CONNECT 24

--- PREVIEW BREAK ---

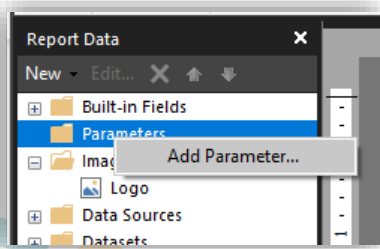
Click the **Run** icon to preview your report – Click **Design** when finished.

5. You will notice that the list of employees in the **001 - Council** department has reduced from 59 to 8, since it now only shows active (**A**) employees

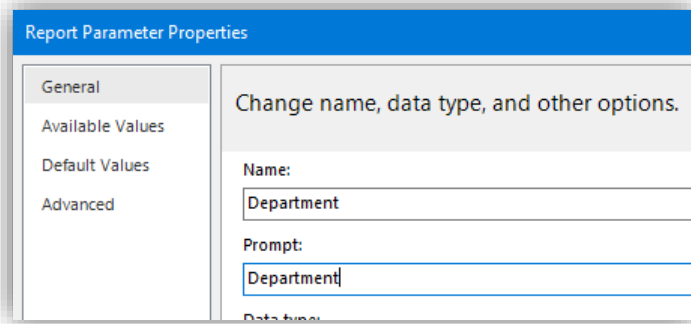
Department	Employee Name ↕	Employee Number
001 – Council (8 employees)		
	Leeks, Destini	3536 E
	Debeaumont, Dayana	3741 E
	Washabaugh, Adolfo	3858 E
	Cutrell, Keith	186 E
	Tueller, Misty P	3017 E
	Maiello, Johanna J	4018 E
	Kreamalmeyer, Armani J	4169 E
	Beecken, Marlon	4170 E
002 – Clerk of Council (2 employees)		
010 – Information Technology (5 employees)		

Creating Parameters

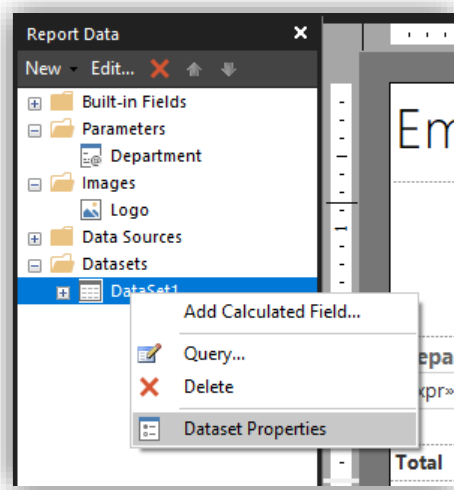
1. In the *Report Data* tray on the left, right-click *Parameters*, then select *Add Parameter*



2. In the *Report Parameter Properties* window, enter **Department** into the *Name* and *Prompt* fields



3. Click **<OK>**
4. In the *Report Data* tray on the left, expand *Datasets*, right-click **DataSet1**, then select *Dataset Properties*

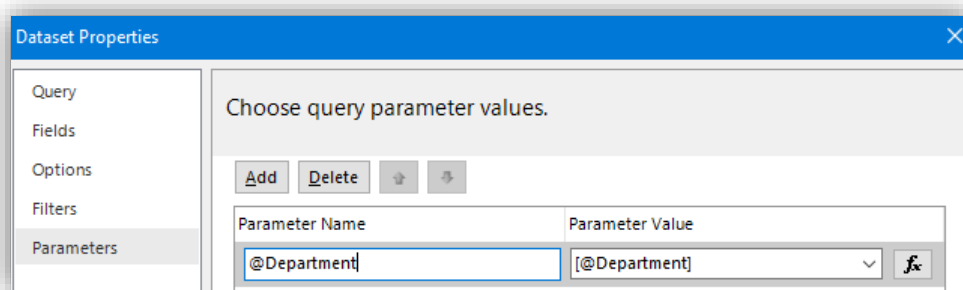


- In the Dataset Properties window pop up, add a **WHERE** clause to the end of the query string
WHERE EPJ.OrgStructureCodeConcatenated IN (@Department)

*NOTE: you can copy this text from the file **3-WhereClause.txt** located in the Windows **Desktop > SSRS** folder*

```
Query:
AND EJ.IsPrimaryJob = 1
AND @AsOfDate BETWEEN EJ.EffectiveDate AND EJ.EffectiveEndDate
JOIN HR.Grade G ON EJ.GradeID = G.GradeId
LEFT JOIN dbo.Position P ON EPJ.PositionID = P.PositionID
LEFT JOIN dbo.PositionDetail PD ON P.PositionID = PD.PositionID
AND @AsOfDate BETWEEN PD.PositionDetailESD AND
PD.PositionDetailEED
LEFT JOIN HR.GradeStep GS ON EJ.GradeStepId = GS.GradeStepId
LEFT JOIN HR.fn_GetEmployee_Base_PayRate_ByDate(@AsOfDate,NULL) EP ON
EI.EmployeeID = EP.EmployeeID
AND EP.IsPrimaryJob = 1
LEFT JOIN dbo.xGroupHeader BG ON EJ.BenefitGroupId = BG.xGroupHeaderId
LEFT JOIN dbo.ValidationSetEntry VSE2 ON ED.vsGender = VSE2.EntryID
LEFT JOIN dbo.ValidationSetEntry VSE3 ON ED.vsRaceId = VSE3.EntryID
WHERE EPJ.OrgStructureCodeConcatenated IN (@Department)
```

- Select the *Parameters* tab on the left
 - A parameter named **@Department** should have been already added for you
 - Select **[@Department]** for the *Parameter Value*
 - This connects the Dataset's parameter to the report parameter you created earlier



- Click **<OK>**

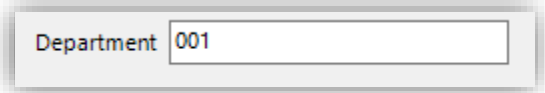
--- PREVIEW BREAK ---

Click the **Run** icon to preview your report – Click **Design** when finished.

Run Design

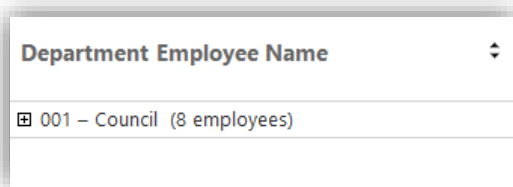
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7. A **Department** parameter will appear at the top
 - a. Enter **001**



Department 001

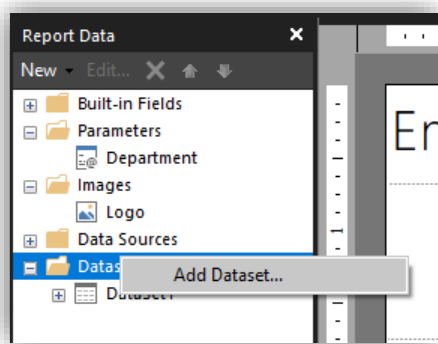
- b. Click **<View Report>**
8. The report should just return results having the department **001**



Department	Employee Name
001 – Council	(8 employees)

List Parameters Using Database Values

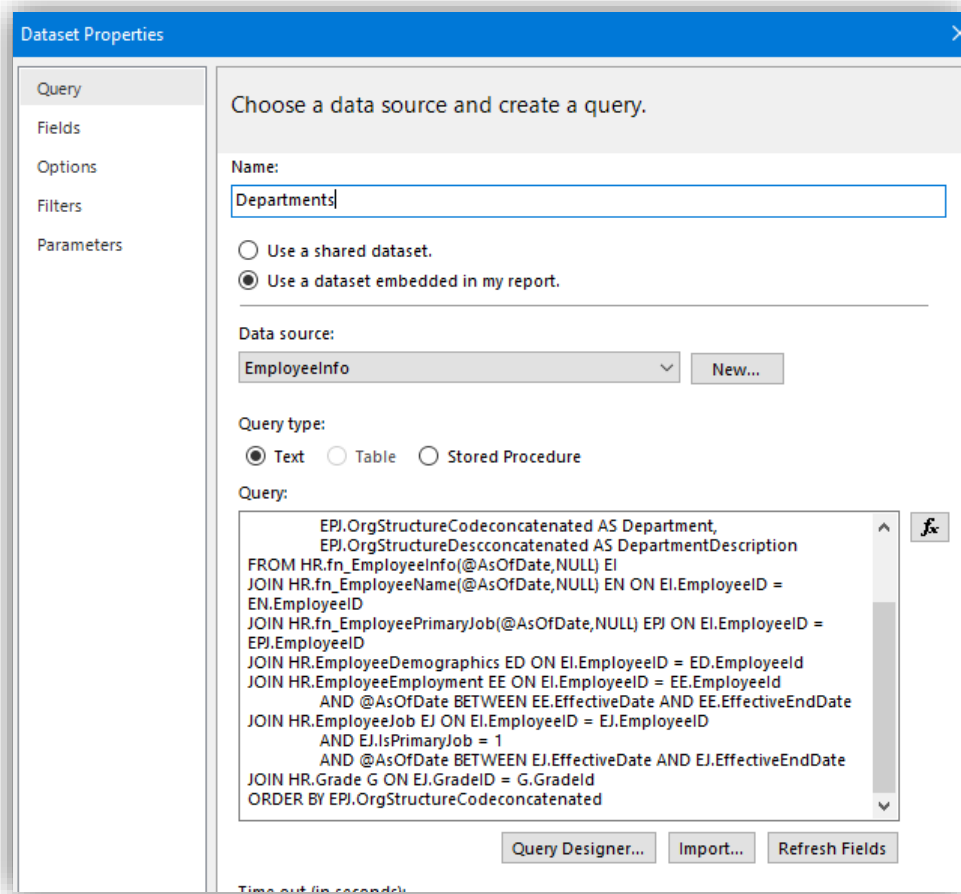
1. In the *Report Data* tray on the left, right click on the *Datasets* folder, then select *Add Dataset*



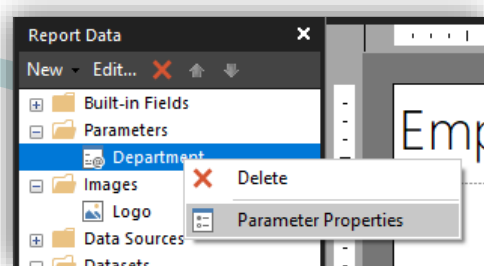
2. In the *Datataset Properties* window enter the following
 - a. **Name: Departments**
 - b. Select *Use a dataset embedded in my report*
 - c. **Data source: NWERP**
 - d. Select *Text*
 - i. Locate the **4-DepartmentDataSet.txt** file in the Windows **Desktop > SSRS** folder and double-click to open it in Notepad

CONNECT 24

1. Highlight all of the text (**Ctrl + A**) and Copy it (**Ctrl + C**) to your clipboard
2. Paste (**Ctrl + V**) the text into the Dataset Properties *Query* window



3. Click **<OK>**
4. In the *Report Data* tray on the left, expand *Parameters*, right click **Department**, then select *Parameter Properties*



5. Check *Allow multiple values*

CONNECT 24

6. Select the *Available Values* tab on the left
 - a. Select *Get values from a query*
 - b. *Dataset: Departments*
 - c. *Value field: Department*
 - d. *Label field: DepartmentDescription*

Report Parameter Properties

General

Available Values

Default Values

Advanced

Choose the available values for this parameter.

Select from one of the following options:

None

Specify values

Get values from a query

Dataset: (Warning: Possible performance impact)

Departments

Value field:

Department

Label field:

DepartmentDescription

7. Click **<OK>**

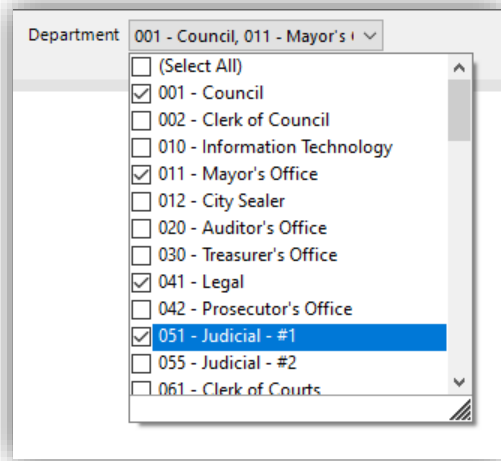
Run

--- PREVIEW BREAK ---

Click the **Run** icon to preview your report – Click **Design** when finished.

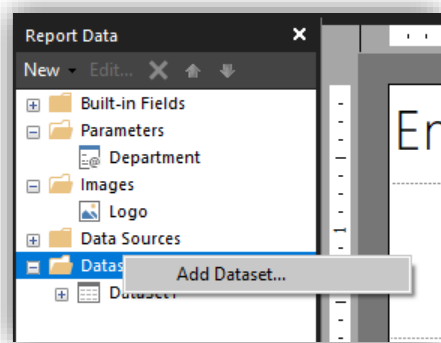
Design

8. You will notice the **Department** parameter now appears as a drop down where you can select multiple departments



Default Parameters

1. In the *Report Data* tray on the left, right click on the *Datasets* folder, then select *Add Dataset*



2. In the *Dataset Properties* window enter the following
 - a. Name: **DateDataSet**
 - b. Select *Use a dataset embedded in my report*
 - c. Data source: **NWERP**
 - d. Select *Text*
 - i. Locate the **5-DateDataSet.txt** file in the Windows **Desktop > SSRS** folder and double-click to open it in Notepad
 1. Highlight all of the text (**Ctrl + A**) and Copy it (**Ctrl + C**) to your clipboard
 2. Paste (**Ctrl + V**) the text into the Dataset Properties *Query* window

Dataset Properties

Choose a data source and create a query.

Name:
DateDataSet

Use a shared dataset.
 Use a dataset embedded in my report.

Data source:
EmployeeInfo New...

Query type:
 Text Table Stored Procedure

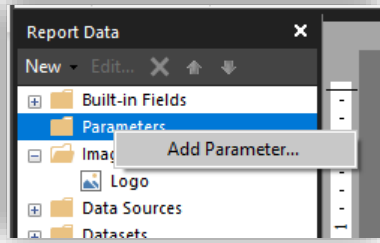
Query:
@PreviousEndOfWeek AS PreviousEndOfWeek,
@PreviousStartOfMonth AS PreviousStartOfMonth,
@PreviousEndOfMonth AS PreviousEndOfMonth,
@PreviousStartOfQuarter AS PreviousStartOfQuarter,
@PreviousEndOfQuarter AS PreviousEndOfQuarter,
@PreviousStartOfYear AS PreviousStartOfYear,
@PreviousEndOfYear AS PreviousEndOfYear,
@NextStartOfWeek AS NextStartOfWeek,
@NextEndOfWeek AS NextEndOfWeek,
@NextStartOfMonth AS NextStartOfMonth,
@NextEndOfMonth AS NextEndOfMonth,
@NextStartOfQuarter AS NextStartOfQuarter,
@NextEndOfQuarter AS NextEndOfQuarter,
@NextStartOfYear AS NextStartOfYear,
@NextEndOfYear AS NextEndOfYear

Query Designer... Import... Refresh Fields

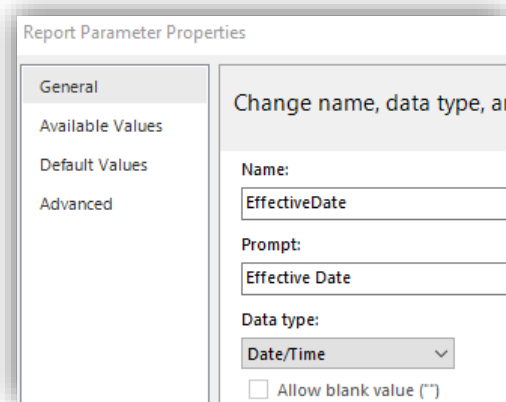
Time out (in seconds):

3. Click **<OK>**

4. In the *Report Data* tray on the left, right-click *Parameters*, then select *Add Parameter*

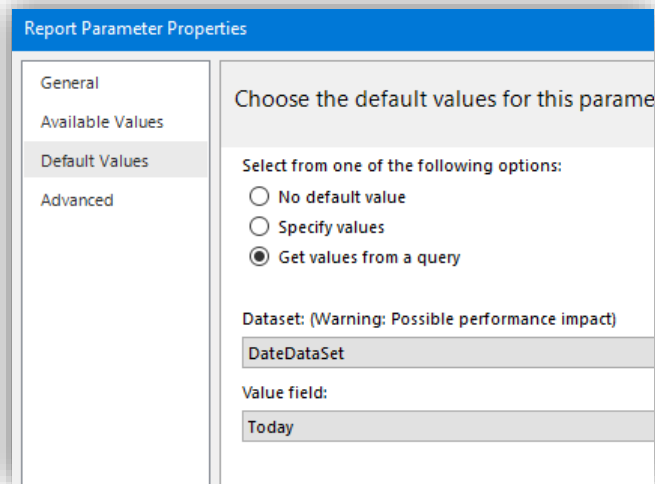


5. In the *Report Parameter Properties* window
 - a. Name: **EffectiveDate**
 - b. Prompt: **Effective Date**
 - c. Data type: select **Date/Time**

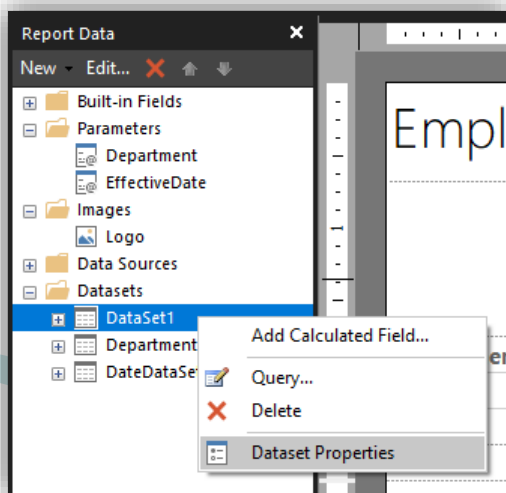


CONNECT 24

6. Select the *Default Values* tab on the left
 - a. Select *Get values from a query*
 - b. *Dataset: DateDataSet*
 - c. *Value field: Today*



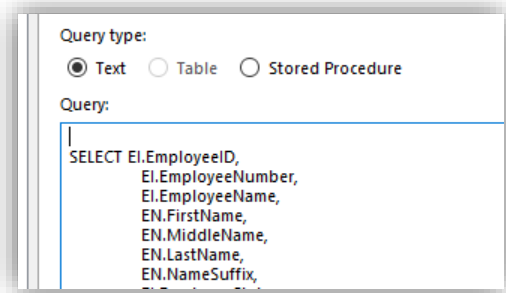
7. Click **<OK>**
8. In the *Report Data* tray on the left, expand *Datasets*, right-click **DataSet1**, then select *Dataset Properties*



9. In the *Dataset Properties* window pop up, remove the first 2 lines of the query string

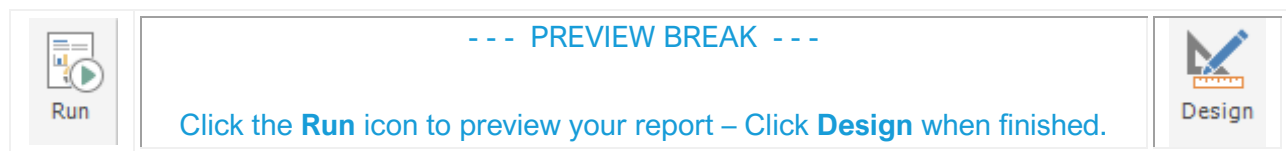
```
DECLARE @AsOfDate DATETIME
```

```
SET @AsOfDate = GETDATE()
```

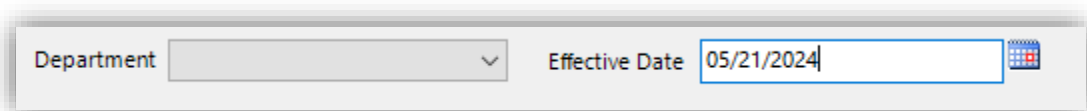


10. Select the *Parameters* tab on the left

- a. A parameter named **@AsOfDate** should have been already added
- b. Select **[@EffectiveDate]** for the *Parameter Value*
 - i. This connects the Dataset's parameter to the report parameter you created earlier
- c. Click **<OK>**

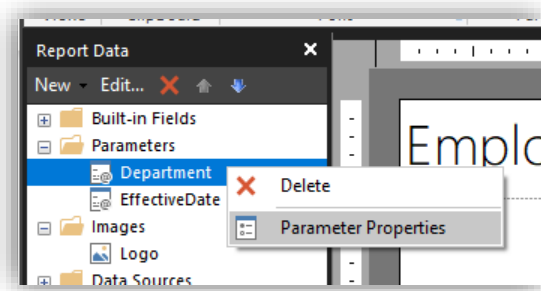


11. An **Effective Date** parameter will appear at the top defaulting in today's date

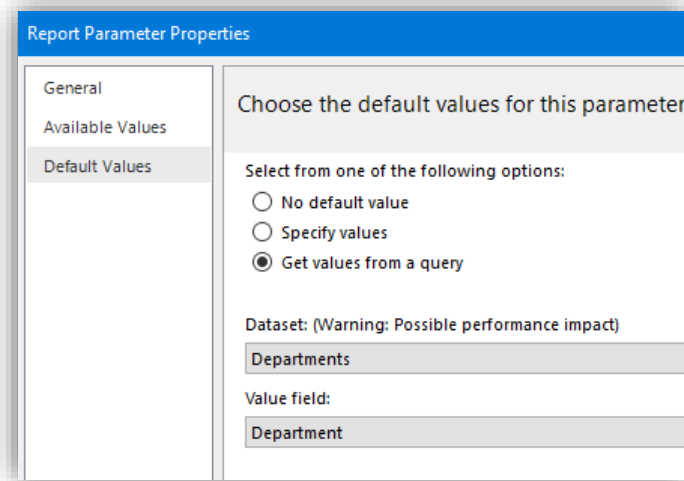


The report will now print the employees' information as of the Effective Date you enter

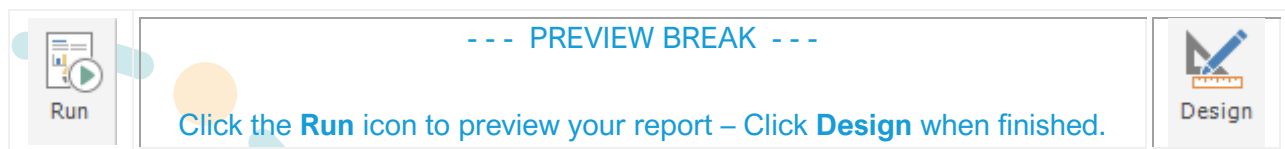
12. In the *Report Data* tray on the left, expand *Parameters*, right click **Department**, then select *Parameter Properties*



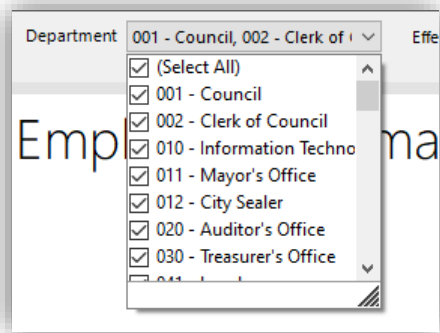
13. Select the *Default Values* tab on the left
- Select *Get values from a query*
 - Dataset: Departments*
 - Value field: Department*



14. Click **<OK>**



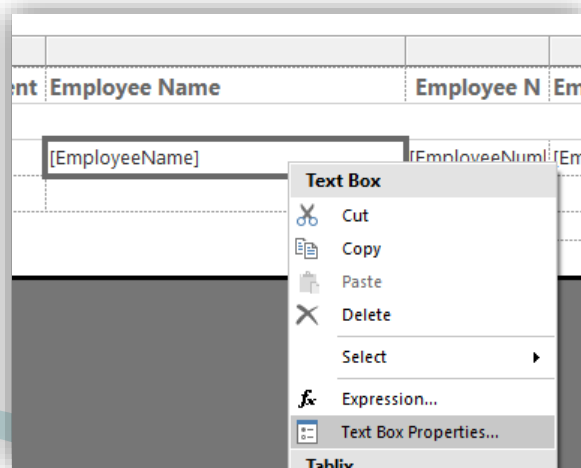
15. You will notice the **Department** parameter now appears auto selects every department from the drop down by default



At this point, the report will automatically generate because default values have been specified for all parameters

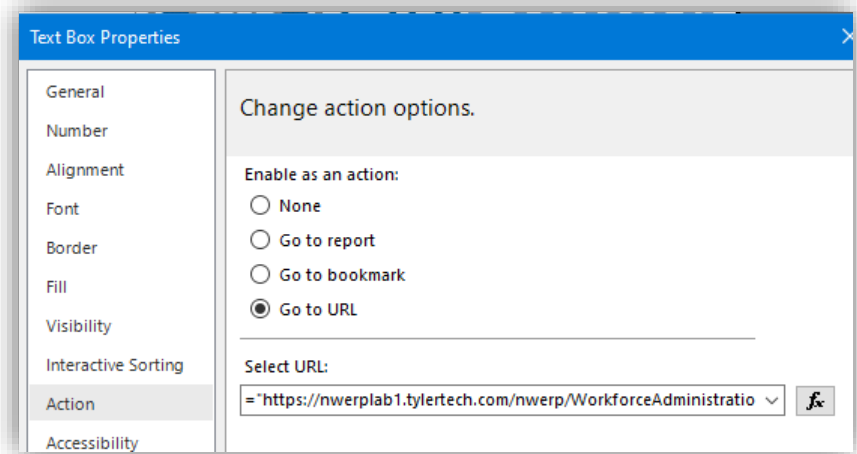
Link to New World ERP

1. Right-click on the **[EmployeeName]** text box in the group header and select *Text Box Properties*



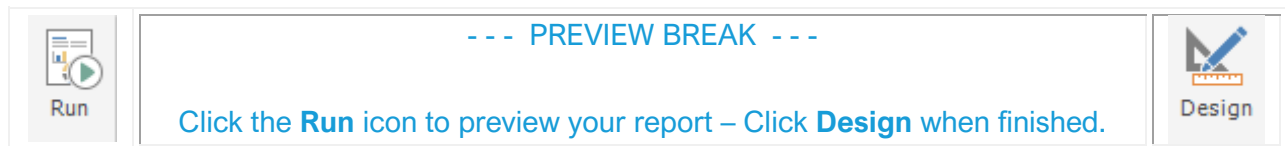
CONNECT 24

2. Select the *Action* tab on the left
 - a. Select *Go to URL*
 - b. Select *URL*
 - i. Locate the **6-EmployeeURLExpression.txt** file in the Windows **Desktop > SSRS** folder and double-click to open it in Notepad
 1. Highlight all of the text (**Ctrl + A**) and Copy it (**Ctrl + C**) to your clipboard
 2. Paste (**Ctrl + V**) the text into the Text Box Properties *Select URL* field



Note: This is the URL to the Workforce Administration page. Many of the URLs in the software end with a unique ID. In this case, it's the EmployeeID from the database.

- c. Click **<OK>**



3. If you run the report and hover over one of the employees in the **Employee Name** column, the mouse pointer should change

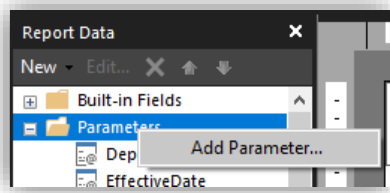
Department	Employee Name
001 – Council (8 employees)	
	Leeks, Destini
	Tueller, Misty P
	Cutrell, Keith

A mouse pointer is hovering over the name 'Tueller, Misty P', and a red arrow points to the mouse pointer.

4. If you click on the employee, it will take you into the Workforce Administration page for that employee
 - a. Login for New World ERP
 - i. User: **lab***
 1. where * represents your laptop station identifier (1 through 50)
 2. example **lab11**
 - ii. Password: **connect123**

Expand/Collapse All

1. In the *Report Data* tray on the left, right-click *Parameters*, then select *Add Parameter*



2. In the *Report Parameter Properties* window
 - a. Name: **ExpandCollapse**
 - b. Prompt: **Expand/Collapse**

CONNECT 24

3. Select the *Available Values* tab on the left
 - a. Select *Specify values*
 - b. Click **<Add>**
 - i. *Label: Expand All*
 - ii. *Value: Expand*
 - c. Click **<Add>**
 - i. *Label = Collapse All*
 - ii. *Value = Collapse*

Report Parameter Properties

General

Available Values

Default Values

Advanced

Choose the available values for this parameter.

Select from one of the following options:

None

Specify values

Get values from a query

Add Delete ↑ ↓

Label	Value
Expand All	Expand
Collapse All	Collapse

4. Select the *Default Values* tab on the left
 - a. Select *Specify values*
 - b. Click **<Add>**
 - i. *Value: Collapse*

Report Parameter Properties

General

Default Values

Choose the default values for this parameter.

Select from one of the following options:

No default value


Specify values

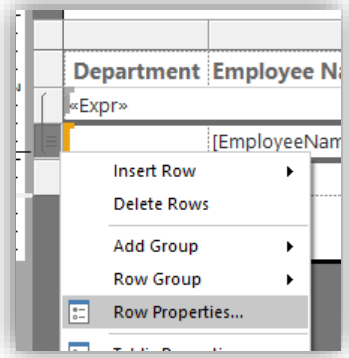
Get values from a query

Add Delete ↑ ↓

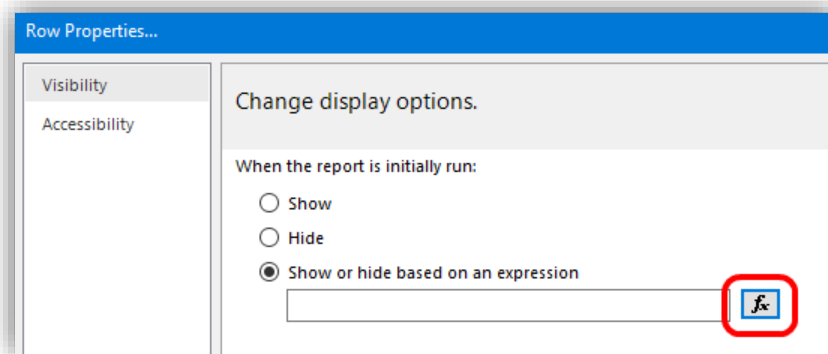
Value
Collapse

5. Click **<OK>**
6. Click somewhere in the Tablix revealing the gray border

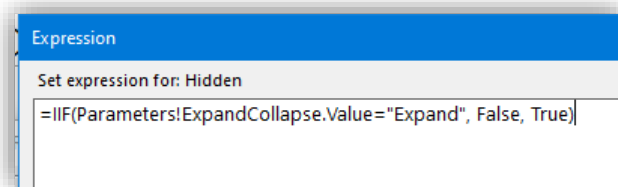
7. Right click on the Details row  in gray border on the left side of the Tablix and select *Row Properties*



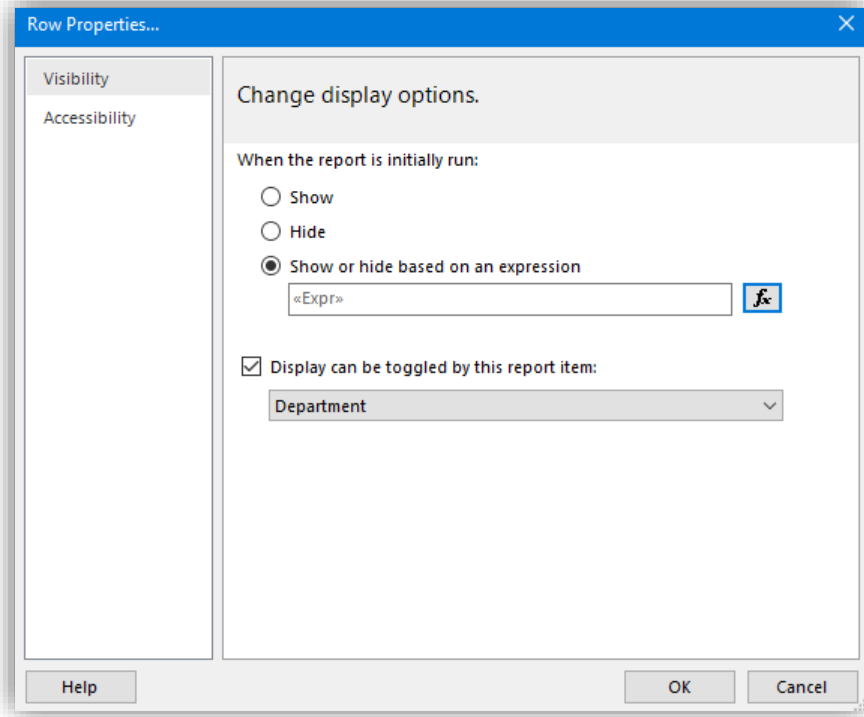
8. Select *Visibility* tab on the left
 - a. Select *Show or hide based on an expression*
 - b. Click the button to add an Expression



- i. Enter the following in the expression
=IIF(Parameters!ExpandCollapse.Value="Expand", False, True)



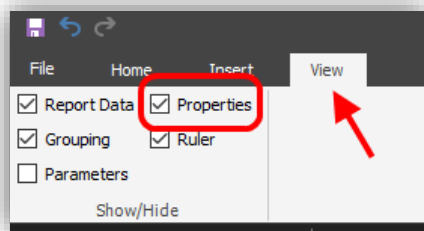
ii. Click <OK>



c. Click <OK>

9. Select the *View* tab at the top of Report Builder

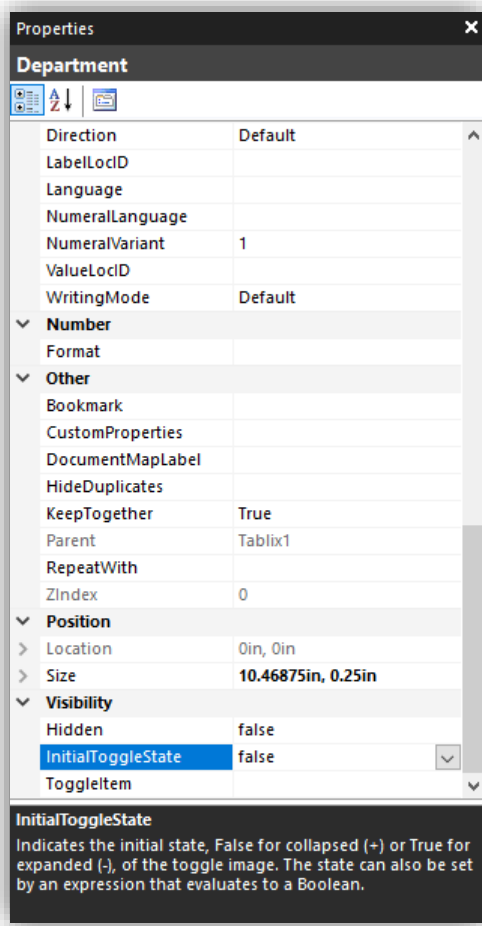
10. Check *Properties* to display the *Properties* tray on the right



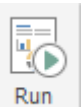
11. In your Tablix, select the Department group header cell (the cell we merged earlier)

Department	Employee Name	Employee N	Employee Ty	Position Number	Position Title	Benefit Grou
<Expr>	[EmployeeName]	[EmployeeNum]	[EmployeeType]	[PositionNumber]	[PositionTitle]	[BenefitGroup]

12. Select the property titled *InitialToggleState* near the bottom of the *Properties* tray under the *Visibility* section




13. Enter the following in the expression, replacing the *false* text
=IIF(Parameters!ExpandCollapse.Value="Expand", True, False)


Run

--- PREVIEW BREAK ---

Click the **Run** icon to preview your report – Click **Design** when finished.


Design

14. Select *Expand/Collapse* = **Expand All**

15. Click <View Report>
Notice all Department groups are expanded

Department 001 - Council, 002 - Clerk of Council Effective Date 05/21/2024 Expand/Collapse Expand All

Employee Information Report

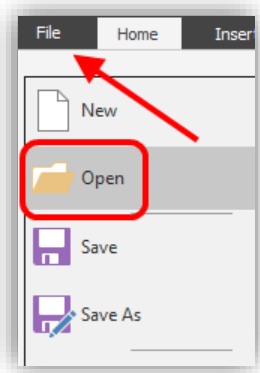


Department	Employee Name	Employee Number	Employee Type	Position Number	Position Title
☑ 001 – Council (8 employees)					
	Kreamalmeyer, Armani J	4169	EO	1059004	Council Person
	Beecken, Marlon	4170	EO	1059002	Council Person
	Debeaumont, Dayana	3741	EO	1059003	Council Person
	Washabaugh, Adolfo	3858	EO	1059001	Council Person
	Leeks, Destini	3536	EO	1059008	Council Person
	Cutrell, Keith	186	EO	1059005	Council Person
	Maiello, Johanna J	4018	EO	1059011	Council Person at Large
	Tueller, Misty P	3017	EO	1060001	Council President
☑ 002 – Clerk of Council (2 employees)					
	Bedson, Seth	4259	PF	2912001	Deputy Clerk of Council
	Schwartz, Kristopher	3643	PF	2001001	Clerk of Council
☑ 010 – Information Technology (5 employees)					
	Buffa, Carmen	2668	PF	10026002	I.T. Specialist 3
	Guiga, Rosalinda	4127	PF	10027001	IT Specialist 2
	Levian, Blanca G	804	PF	10912001	Information Technology
	Hoder, Jarod A	2273	PF	10026001	I.T. Specialist 3
	Bierbower, Blair S	3731	PF	10022001	IT Specialist 1
☑ 011 – Mayor's Office (3 employees)					
	Bunche, Helen C	4130	TP	11001001	Administrative Assistant
	Burtner, Stefan G	669	PF	11030002	Police Support Specialist
	Gonzalez, Nadine	2183	EO	11067001	Mayor


EXERCISE – UPDATE AN EXISTING REPORT TO ALLOW DATA ENTRY



Free Form Entry

1. Open an existing report by clicking *File > Open* in the upper left corner

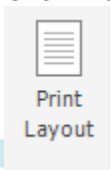


- a. Locate the **EmployeeVerificationForm.rdl** file in the Windows **Desktop > SSRS** folder and double-click to open it in Report Builder

 CityCounty <i>an integrated community</i>	123 Elm Street City County, MI 48084 (248) 269-1234		
Name	[EmployeeName]	Date	«Expr»
Hire Date	[HireDate]		
Position	[PositionTitle]		
Address	[PrimaryAddressLineOne] [PrimaryCity], [PrimaryState] [PrimaryZip]		
Remarks			

 Run	--- PREVIEW BREAK ---	 Design
Click the Run icon to preview your report – Click Design when finished.		

2. Select any employee and click **<View Report>**
3. Click the Print Layout icon to view the report in a print preview mode



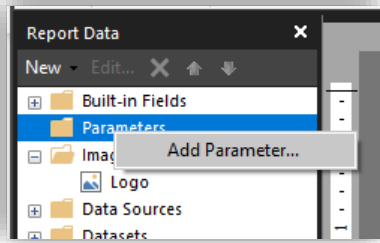
CONNECT 24

The screenshot shows a software interface with a menu bar (File, Run) and a toolbar with navigation and printing icons. Below the toolbar is a dropdown menu for 'Select Employee' with the value '4267 - Abes, Maranda'. The main content area displays the CityCounty logo and contact information: '123 Elm Street, City County, MI 48084, (248) 269-1234'. Below this, employee details are listed: Name: Abes, Maranda; Date: 05/02/2024; Hire Date: 11/21/2022; Position: Housing Inspector; Address: 2444 Mulberry Way, TROY, MI 48084. A large empty box labeled 'Remarks' is provided for notes. At the bottom, there are lines for 'Manager' and 'Date'.

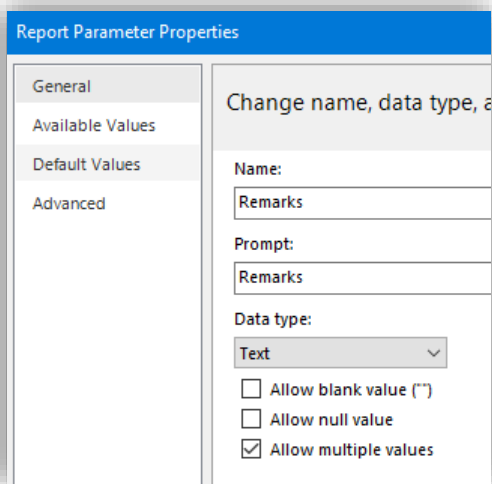
This is a basic Employment Verification Form with an area for Remarks. Instead of writing in remarks by hand, we're going to modify this report to allow you to enter them through SSRS.

CONNECT 24

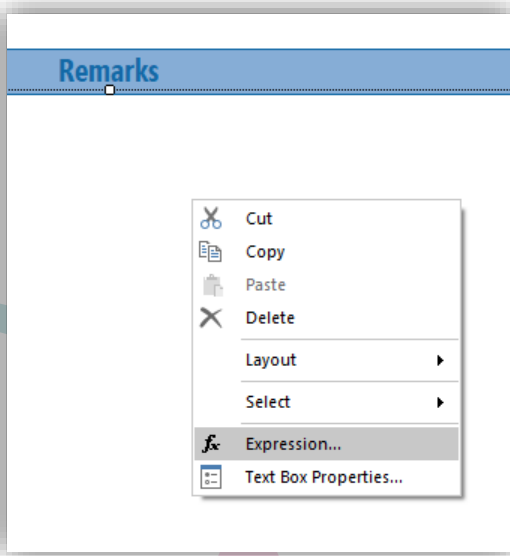
4. In the *Report Data* tray on the left, right-click *Parameters*, then select *Add Parameter*



5. In the *Report Parameter Properties* window, enter **Remarks** into the *Name* and *Prompt* fields.

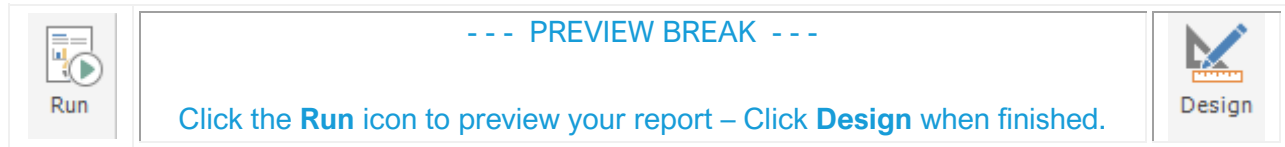


6. Click **<OK>**

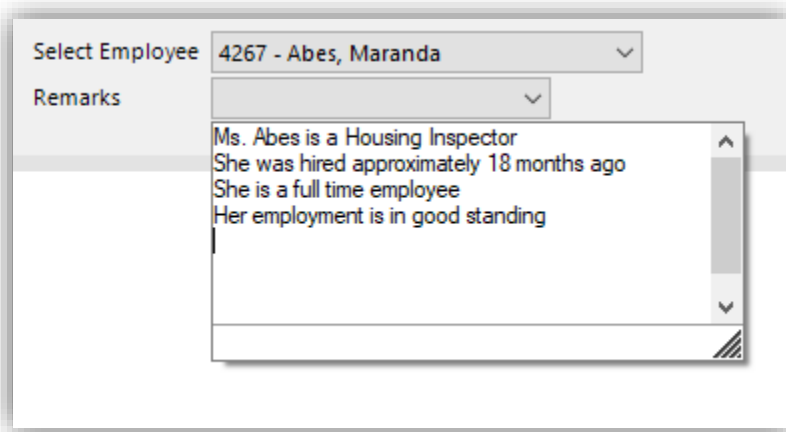


CONNECT 24

7. Enter the following into the *Expression* window
 - a. `=Join(Parameters!Remarks.Label, chr(10))`
8. Click **<OK>**



9. Click the drop-down arrow next to the new **Remarks** parameter
10. Click inside the area that opens and begin typing a message



Note: You can press enter to go to a new line and enter as much text as you like

11. Click **<View Report>**



CityCounty
an integrated community

**123 Elm Street
City County, MI 48084
(248) 269-1234**

Name Abes, Maranda
Hire Date 11/21/2022
Position Housing Inspector
Address 2444 Mulberry Way
TROY, MI 48084

Date 05/02/2024

Remarks

**Ms. Abes is a Housing Inspector
She was hired approximately 18 months ago
She is a full time employee
Her employment is in good standing**

Manager

Date

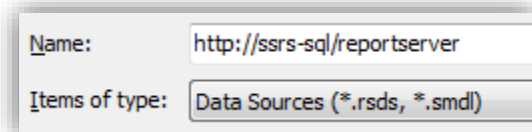
APPENDIX

Data Sources

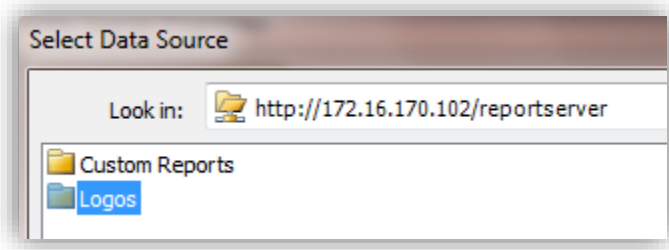
When New World ERP reports have been deployed to an SSRS Report Server, a Data Source is created to allow the standard reports to connect to the New World ERP Database. This *Shared Data Source* should be used when creating new or modifying existing reports.

In Report Builder, instead of creating a new data source, you can **<Browse>** for an existing one. After clicking the **<Browse>** button in the *Data Source Properties* menu, enter the report server URL into the file name field. The URL is structures as follows...

<http://SSRS Server Name or IP Address/reportserver>

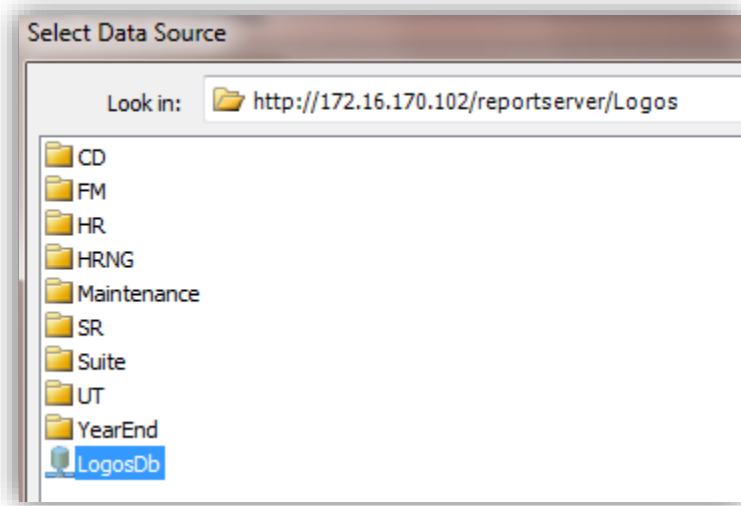


Press **<Enter>** or click the **<Open>** button to browse the Report Server directory. You should see the folder where the New World ERP SSRS reports were deployed during the initial installation.



Located and select the data source icon  and click **<Open>**. The data source will typically be named *LogosDB*.

CONNECT 24



SSRS Report Services URL

The SSRS Report Server (i.e. Reporting Services) is generally installed on the New World ERP Database Server. The Reporting Services directory tree can be accessed using one of the following URLs:

<http://ServerName/reports>

Use this path when directly browsing the SSRS folders via Internet Explorer, setting security, uploading new reports, creating folders, etc.

<http://ServerName/ReportServer>

This path provides a basic navigation which can be used for browsing and uploading reports via Report Builder.

SSRS Report Services URL (Named Instances of SQL)

If using a named instance of SQL, the URL must include an underscore followed by the name of the instance. In the example below, the SQL instance is called "finance."

http://ServerName/reports_finance

Direct Links to Custom Reports

Once the report is published, a direct link to execute it can be obtained with the following URL structure:

<http://ServerName/ReportServer/Pages/ReportViewer.aspx?%2fFolderName%2fCustomReportName>

If there are multiple folders in the directory, they should be ordered sequentially. Use “%2f” instead of ‘/’ between folder names. Spaces in the folder names must be separated with a + sign.

Example:

<http://NWSDB/ReportServer/Pages/ReportViewer.aspx?%2fCustom+Reports%2fFinance+Department%2fBudgetAnalysis>

Query Designer

When building a dataset, the query can be built from the Report Builder *Query Designer* tool. This feature can be accessed from the Dataset (Query) Properties, by clicking the <Query Designer> button.

A rectangular button with a light blue border and a light blue background, containing the text "Query Designer..." in a dark blue font.

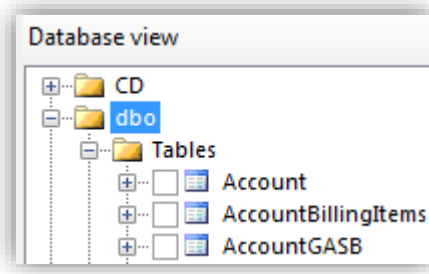
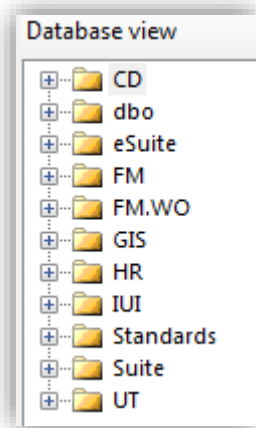
Query Designer provides a visual query mechanic for those not familiar with SQL syntax.

CONNECT 24

It has four components:

1. Database View

The *Database View* can be drilled into through the folder structure on the left.



Tables and Views are categorized into folders, based on their applied schema (i.e. FM, HR, UT, CD), although most of the classic tables can be currently found in the DBO (database object) schema.

A table can be selected as a whole or by selecting individual fields. Fields will either be used in the report output or to link to other tables.

2. Selected Fields

Fields selected from the *Database View* will populate the *Selected Fields* window. If a field is represented by more than one table, it will appear as *Table Name Field Name*.

The *Selected Fields* window will allow you to move, delete, or group fields.

Field	Aggregate
CentralName CentralNameID	(none)
SSN	(none)
FormalName	(none)
Vendor VendorID	(none)
VendorNumber	(none)
Vendor CentralNameID	(none)
VendorContactID	(none)
VendorContactVendorID	(none)

If the fields are grouped, an aggregate is selected from the right-hand column.


Example: The “sum” aggregate applied to the **TransactionAmount** will sum the transactions where all other grouped fields share a common set of values.

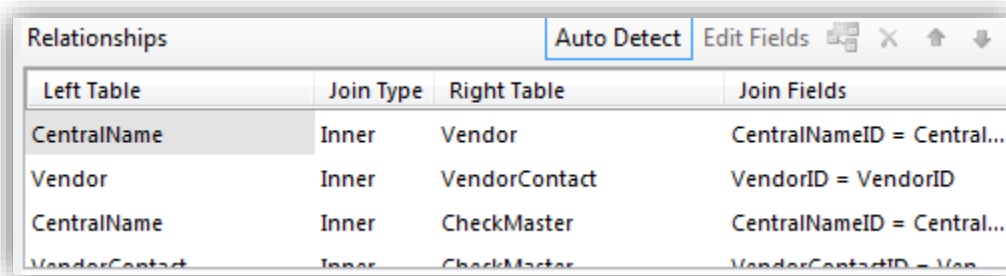
Field	Aggregate
Vendor CentralNameID	Grouped by
VendorContactID	Grouped by
VendorContact VendorID	Grouped by
ContactName	Grouped by
PrimaryContactFlag	Grouped by
CheckMaster CentralNameID	Grouped by
Sum_TransactionAmount	Sum

CONNECT 24

3. Relationships


Relationships represent the joins between one or more tables. They are joined on a key that the tables share. It is common to have many joins in a single query.

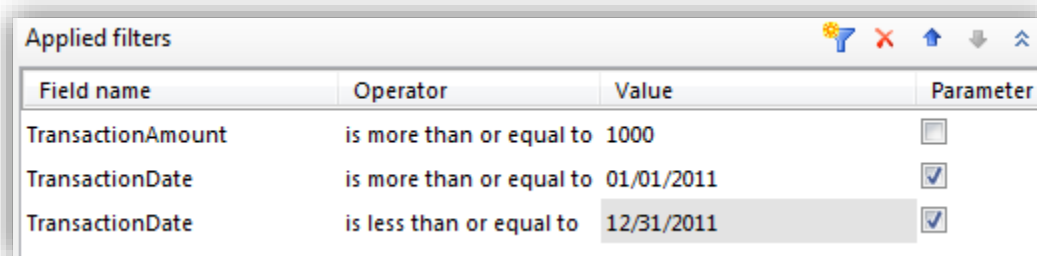
The *Relationships* are generally collapsed by default. The Auto Detect feature Auto Detect serves to build the table joins automatically. This setting can be turned off by clicking the button and manual joins can be created, if desired. The  icon can be used to expand this section. You can also use the expand toggle to view the automatically created joins.




Left Table	Join Type	Right Table	Join Fields
CentralName	Inner	Vendor	CentralNameID = Central...
Vendor	Inner	VendorContact	VendorID = VendorID
CentralName	Inner	CheckMaster	CentralNameID = Central...
VendorContact	Inner	CheckMaster	VendorContactID = Ven...

4. Applied Filters


Filters  can apply a measured constraint or restrict the query to a specific set of values. The filter may indicate that a specific value should be validated, or it can be used as a parameter, which will allow the end-user to specify the criteria.



Field name	Operator	Value	Parameter
TransactionAmount	is more than or equal to	1000	<input type="checkbox"/>
TransactionDate	is more than or equal to	01/01/2011	<input checked="" type="checkbox"/>
TransactionDate	is less than or equal to	12/31/2011	<input checked="" type="checkbox"/>

 Edit as Text

You can view the SQL syntax for your query at any time by clicking the **<Edit As Text>** button.

 Run Query

Before completing your dataset, use the **<Run Query>** button to confirm it returns the values you were expecting. This will also help to catch any errors, due to improper query design.