

# Inference in Word QuickStart 3

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## *Use an Inference DataFrame in Inference in Word*

Inference in Word QuickStart 3 shows you how to:

- Import a DataFrame into an Inference in Word document.
- Use that data in your code to perform some useful tasks.

Note: Before beginning this QuickStart, please complete **Inference DataFrames QuickStart 1: Assemble data to access from R code**.

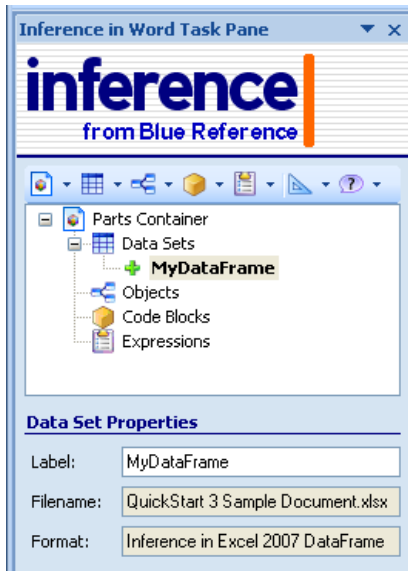
### 1. Add a Parts Container

1. Create or open a Word document.
2. Select **Inference > Add Parts Container**.

### 2. Import a DataFrame

To import the DataFrame created in the Inference in Excel DataFrame QuickStart 1:

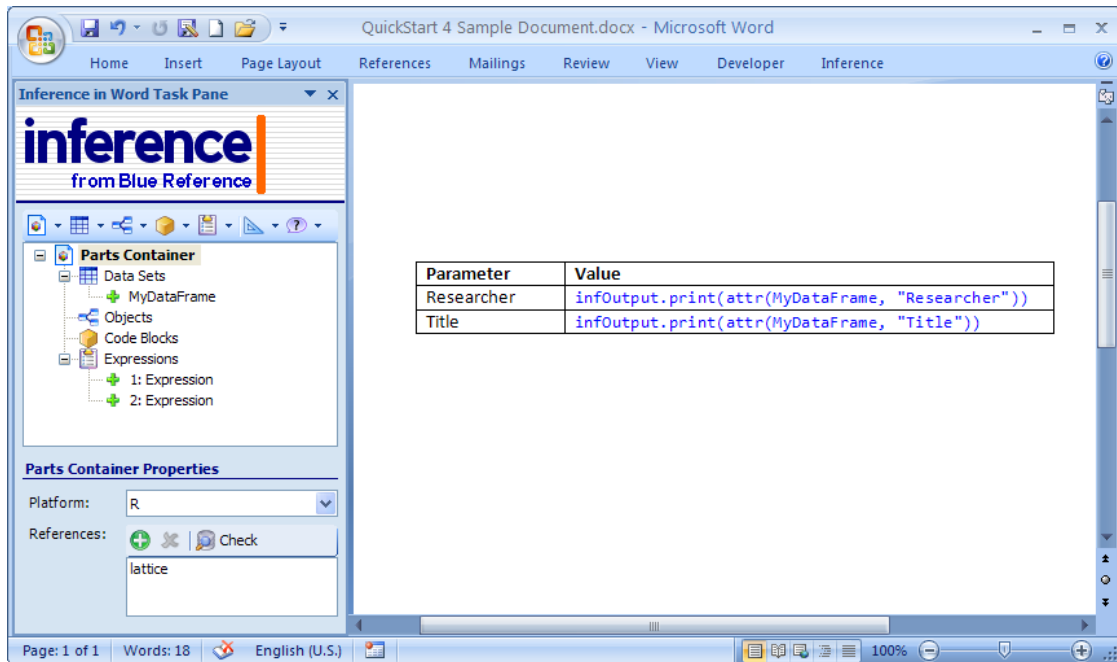
1. From the **Parts Container** toolbar, select **Data Set > Import Data Set**, then select **Existing Inference in Excel 2003 DataFrame Document** (if you are using Office 2003) or **Existing Inference in Excel 2007 DataFrame Document** (if you are using Office 2007).
2. Navigate to the file containing the DataFrame from QuickStart 3. Select it and click **Open**.
3. In the **Parts Container** tree, select the name of the imported Data Set.
4. In the **Data Set Properties** section at the bottom of the Inference Task Pane, change the label from the file name to **MyDataFrame**. Note that the label is case sensitive.
5. Compare your results to the following:



### 3. Access DataFrame Attributes

To display the attributes of a DataFrame in your results document:

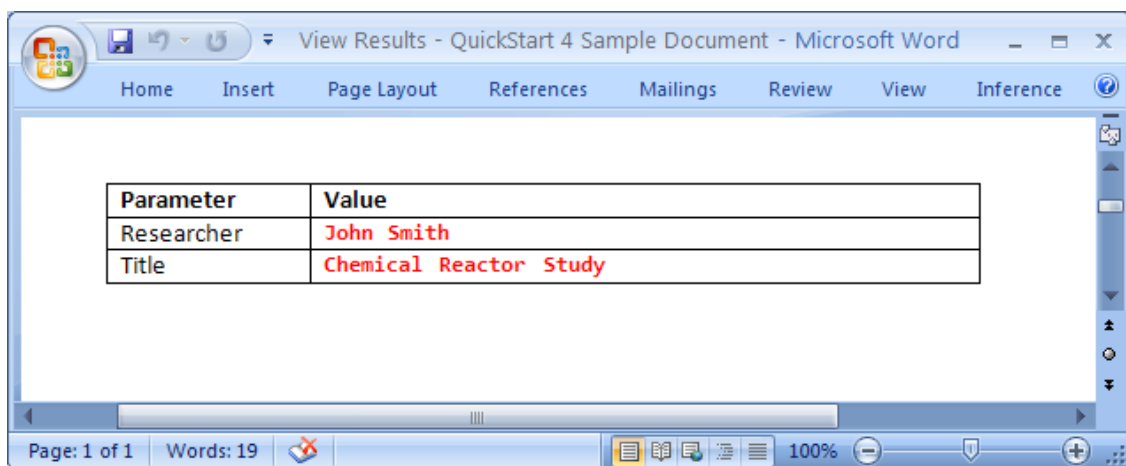
1. On the Word canvas insert a 2 (column) X 3 (row) table. Label the columns **Parameter** and **Value**.
2. Under **Parameter** type **Researcher** and **Title**.
3. Insert a New Expression into each of the remaining two cells:
  - a. Click in the table cell.
  - b. In the **Parts Container** tree, right-click on **Expressions**.
  - c. Select **Insert New Expression**.
4. Edit the expressions with the following instructions for Researcher and Title, respectively:
  - `infOutput.print(attr(MyDataFrame, "Researcher"))`
  - `infOutput.print(attr(MyDataFrame, "Title"))`
5. Compare your Word canvas to the following:



#### 4. View the Results

To view the results of the accessing the attributes of **MyDataFrame**:

1. Save the document.
2. In Word 2007: Click the **Inference** tab on the Word Ribbon.  
In Word 2003: Click the **Execute Document** button at the bottom of the Inference in Word Task Pane.
3. To view the results as a Microsoft Word document, select **To Results Document View > Microsoft Word View**.



## 5. Access DataFrame Contents using R Code

The following example illustrates how to access the data vectors and the corresponding attributes in the DataFrame:

1. Select the **Parts Container** root in the tree.
2. Under Parts Container Properties, click the Add (+) **References** and then select the **lattice R package**
3. In the Word document, click where you want to insert a new code block.
4. In the Parts Container tree, right-click **Code Blocks**, and then select **Insert and Edit New Code Block**.
5. Add the following code, which you can copy and paste:

```
attach(MyDataFrame)

TempLabel <- attr(Temp, "Label")
TempUnits <- attr(Temp, "Units")
xLabel <- paste(TempLabel, " [", TempUnits, "]")

YieldLabel <- attr(Yield, "Label")
YieldUnits <- attr(Yield, "Units")
yLabel <- paste(YieldLabel, " [", YieldUnits, "]")

xyplot(
  Yield ~ Temp | Conc * Cat,
  cex=3,
  type="b",
  lwd=5,
  xlab=xLabel,
  ylab=yLabel
)
```

6. Under **Code Block Properties** set **Output Code** to **No**. The contents of the code block will not be included in the results document.

## 6. View the Final Results Document

To view the results of executing this code, do the following:

1. In Word 2007: Click the **Inference** tab on the Word Ribbon.  
In Word 2003: Click the **Execute Document** button at the bottom of the Inference in Word Task Pane.
2. To view the results as a Microsoft Word document, select **To Results Document View > Microsoft Word View**.
3. The results document displays the Data Vectors from DataFrame in an xyplot containing the Data Vector attributes in the x and y labels:

View Results - QuickStart 4 Sample Document.docx - Microsoft Word

Home Insert Page Layout References Mailings Review View Developer Inference

Parameter	Value
Researcher	John Smith
Title	Chemical Reactor Study

The figure consists of four line graphs arranged in a 2x2 grid. The y-axis for all graphs is 'Yield [%]' ranging from 50 to 80. The x-axis for all graphs is 'Temperature [deg-C]' ranging from 160 to 180. The top row of graphs is labeled 'B Conc' and the bottom row is labeled 'A Conc'. Each graph shows a blue line with circular markers at two data points. The top-left graph (B Conc) shows yield increasing from approximately 55% at 160°C to 80% at 180°C. The top-right graph (B Conc) shows yield increasing from approximately 50% at 160°C to 80% at 180°C. The bottom-left graph (A Conc) shows yield increasing from approximately 60% at 160°C to 75% at 180°C. The bottom-right graph (A Conc) shows yield increasing from approximately 55% at 160°C to 70% at 180°C.

Condition	Concentration	Temperature [deg-C]	Yield [%]
B	Conc	160	55
		180	80
B	Conc	160	50
		180	80
A	Conc	160	60
		180	75
A	Conc	160	55
		180	70

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