



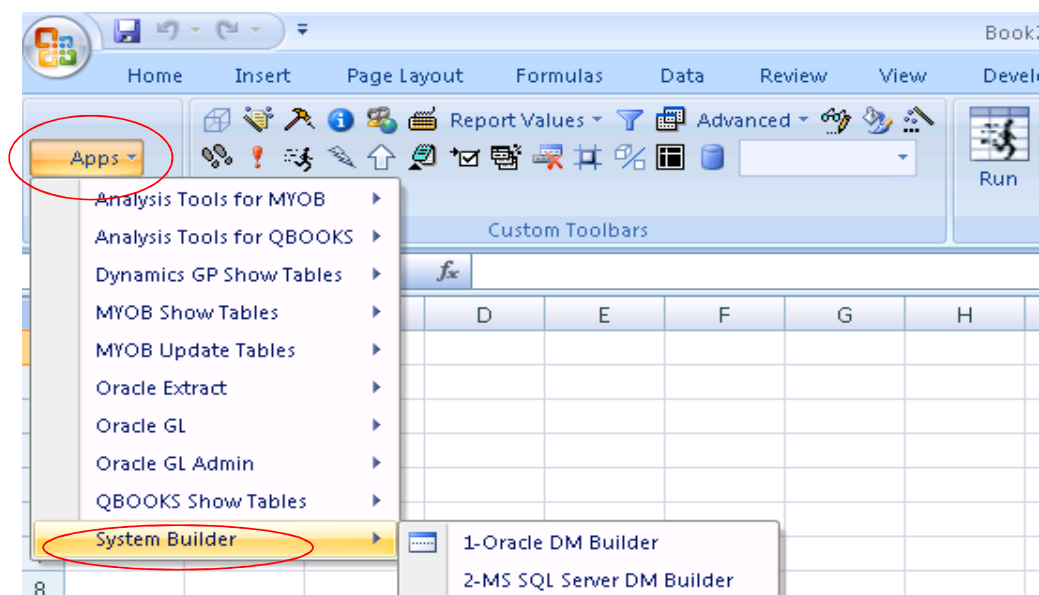
Using System Builder for D4E

The System Builder for D4E menu contains various options to create database viewers and insert these programs as custom menus in Excel. These database viewers effectively give D4E users a powerful Report Writer that can create reports for ERPs, GL packages, and/or any other ODBC-compliant databases that may store reportable information. The System Builder is included in the D4E trial version along with other menus, including:

- Analysis Tools for MYOB
- Analysis Tools for QBOOKS
- Dynamics GP Show Tables
- MYOB Show Tables
- MYOB Update Tables
- Oracle Extract
- Oracle GL

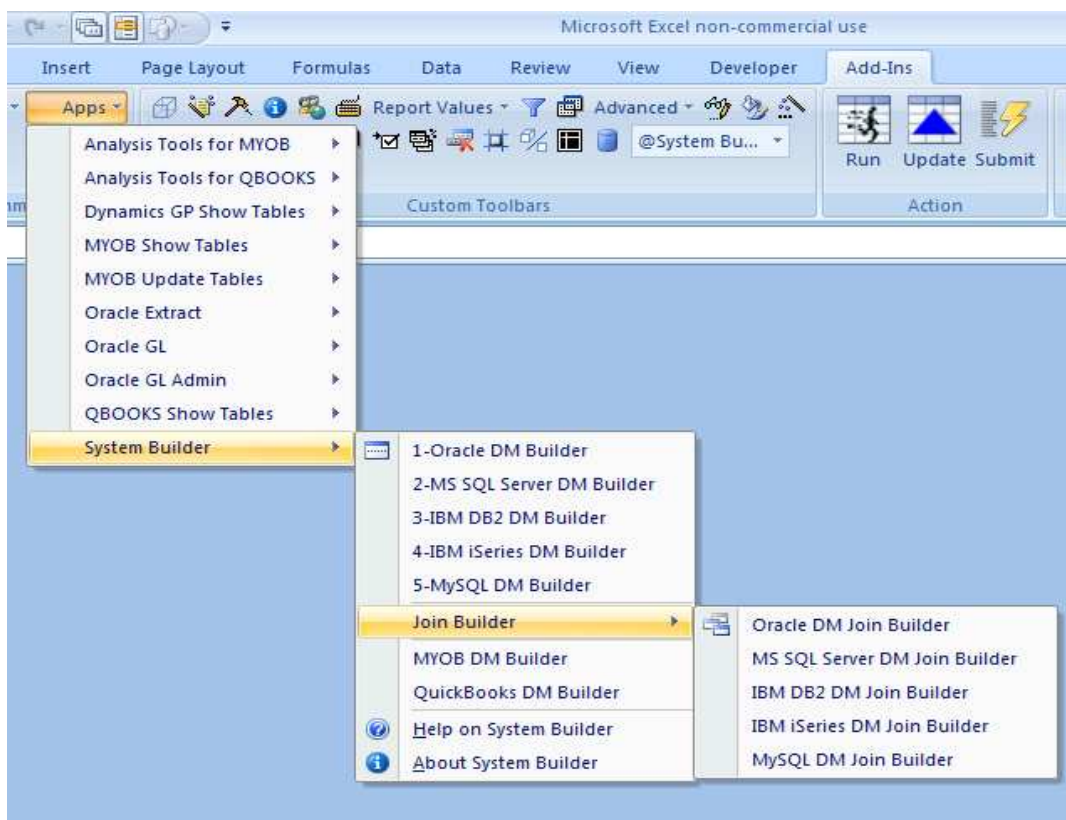
Within System Builder for D4E, there are several menu options available. To see the menu options, click on the following actions on the Excel menu bar. (For Excel 2007 and later, the menu option is found under the 'Add-Ins' Excel top menu. For earlier versions of Excel, D4E is found as one of the Excel top menus.)

Icon	Action	Details
	Apps... System Builder...	This action will present all the options available as below.



The following are the menu options for System Builder for D4E

Icon	Action	Details
	1-Oracle DM Builder	Automatic datamart builder for Oracle databases
	2-MS SQL Server DM Builder	For Microsoft SQL Server databases
	3-IBM DB2 DM Builder	For IBM DB2 mainframe databases
	4-IBM iSeries DM Builder	For IBM iSeries DB2 systems
	5-MySQL DM Builder	For MySQL Databases
	Join Builder ...	To see additional menus
	MYOB DM Builder	For MYOB supplied databases
	QuickBooks DM Builder	For QuickBooks supplied databases
?	Help on System Builder	This Help Document
i	About System Builder	About information for this application



Automatic datamart builders allow the user to automatically create multiple data viewers of DB tables by simply nominating the range of table names found in the database schema. For each table name that qualifies in the range, a complete datamart definition will be created and stored in the Program library.

These data viewers will also automatically be included as menu items in the Excel main menu system so that end-users can access them quickly.

Under the Join Builder submenu, there are additional menus as follows:

Icon	Action	Details
	Oracle DM Join Builder	Adhoc datamart builder for Oracle databases
	MS SQL Server DM Join Builder	For Microsoft SQL Server databases
	IBM DB2 DM Join Builder	For IBM DB2 mainframe databases
	IBM iSeries DM Join Builder	For IBM iSeries DB2 systems
	MySQL DM Join Builder	For MySQL Databases

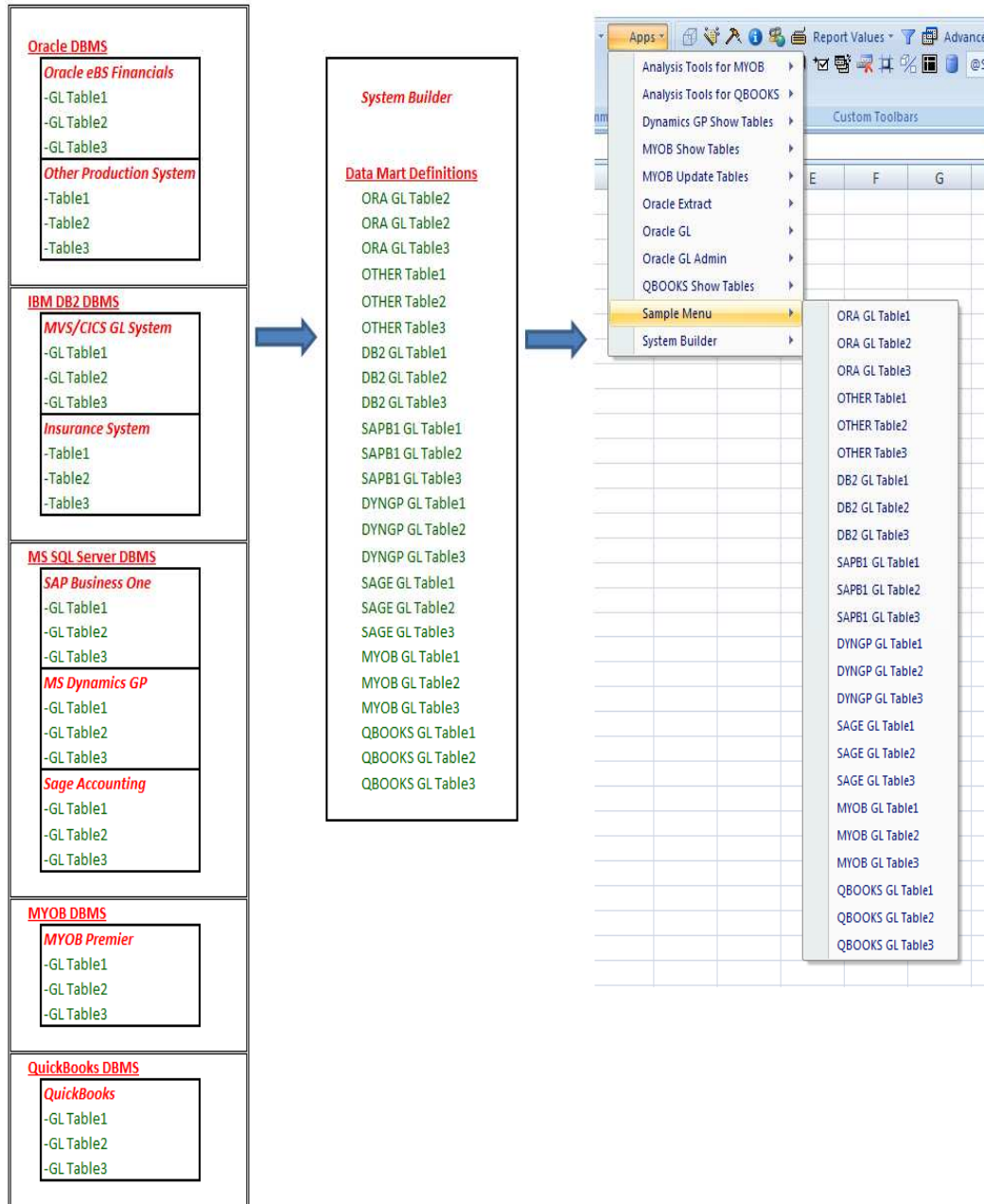
Join Builders build adhoc datamarts instead of automatic. Because it is not automated, there are more steps to building adhoc datamarts, however, the adhoc datamarts have more functionality.

The Join Builder will only build one datamart at a time, while automatic mode creates multiple datamarts. This is because, for each adhoc datamart built, you will need to specify join conditions for one or more tables to report on. The resulting datamart will be a very powerful and customised view of the database information available to end-users inside Excel.

Both automatic Join Builders and customised adhoc method utilise the schema information of the database system (DBMS) to determine how to define the datamart. Since these schema information is stored differently for each DBMS supplier, builders are therefore specific to each DBMS (ie, Oracle DM Builder, IBM DB2 DM Builder, etc)


However, within a DBMS there can be multiple applications hosted - eg, ERP's, GLs, product systems. The same builder can build datamarts for any application within the same DBMS. Different products/ applications can be distinguished within D4E, by specifying different prefixes on the menu titles during the Build process.

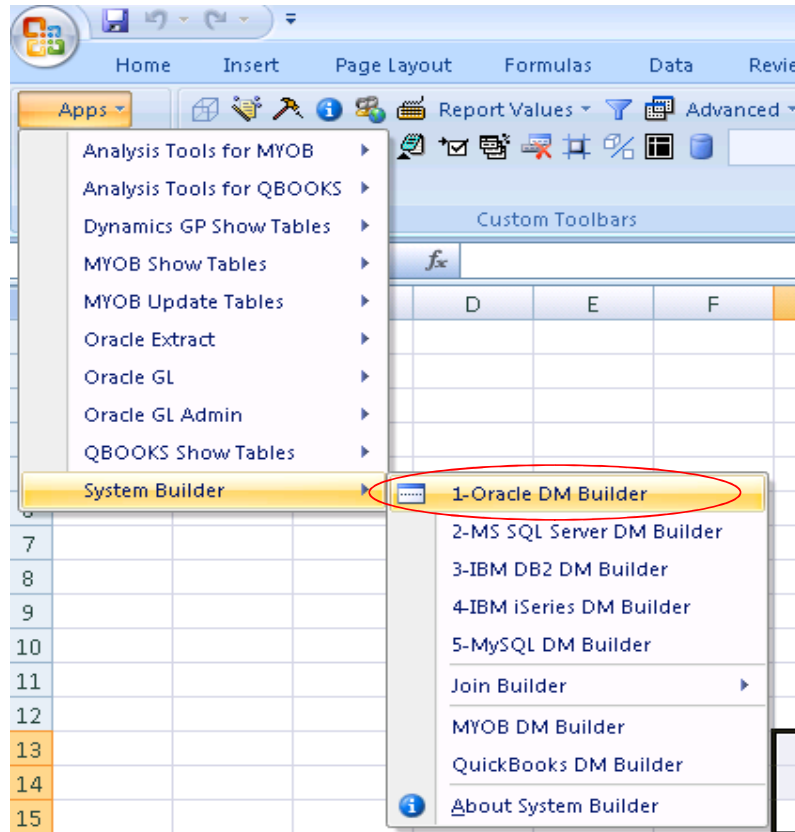
The diagram below gives an overview of how the System Builder reads the different DBMS and schemas to automatically build the datamart definitions. These definitions are then assembled into menus that appear alongside normal Excel menus.




The next sections will discuss in detail the menu options for System Builder for D4E.

Option 1-Oracle DM Builder

Icon	Action	Details
	Apps... System Builder... 1-Oracle DM Builder	This action will present the automatic datamart builder for Oracle-based applications, ERPs, or GLs.



A parameter screen for Runtime Prompts will be presented as follows:

Complete all details of each parameter prompt. You can click on the Show Choices button to see the valid prompts. 


The parameter prompts are:

	Prompt	Details
1	CHOOSE ORACLE USERID ODBC AS	Enter the System DSN name set up for the Oracle ODBC driver.
2	ORACLE LOGON USERID	Enter your Oracle DB logon id for ODBC access
3	ORACLE LOGON PASSWORD	Enter your Oracle DB logon password
4	CHOOSE ORAOWNER USERID	Enter the name of the Oracle schema that owns the databases you want to access
5	CHOOSE ORATABLE IN	Enter the range of table names that you wish to access. A range can be a list of names separated by a comma; a from-to; a name-pattern using %; or a combination of these. eg: table1, table2, table3 table10-table20 %table% Click on the Choices to see the list of tables names for the specified schema name.
6	CHOOSE APPTITLE AS	Enter a prefix text that will uniquely identify these datamarts and menus from those created previously.

The APPTITLE text will be appended to the datamart details of each menu item to prevent the same names being used.

Some General Notes on Using the Runtime Prompts Screen

Runtime prompts are common to all datamart applications in D4E. It is used to accept parameters for customising the information retrieved from the database. The Runtime Prompt screen has the following action buttons and help facility.

Icon	Action	Details
	Show Choices	This action displays the possible values for the prompts
Preferences	Logon with New Userid/Password	This action opens the locked prompts so that new userid or password can be entered.
Help	Show Help Screen	Display the help screen for this Runtime Prompt
Show Script	Create Script	Create a script using the parameter prompts.
Customise	Customise Fields	Customise the results by removing columns
More Less	More or Less Labels	Increase or decrease the label width to show more or less characters

Clicking on any of the Show Choices buttons will expand the screen to display addition information. From the Runtime Prompt above, click on Show Choice against Prompt No. 6 to display choices for Seg-A as follows:






My Data Mart - Runtime Prompts - ORAGL_GL_BALANCES

Customise Fields
Formatted ☒
Append File
Show Script
Run Script
Skip to Resume
Clear All
Preferences ☐
Help
More Label
Less Label

1. SELECT ORACLE USERID ODBC
2. ORACLE LOGON USERID?
3. ORACLE LOGON PASSWORD?
4. SELECT SETBOOKS LIKE?
5. SELECT YYYYMM IN?
6. SELECT CURRENCY LIKE?
7. SELECT ACTUALFLAG LIKE?
8. SELECT COMPANY SEGMENT1
9. SELECT BRANCH SEGMENT2
10. SELECT ACCOUNT SEGMENT3
11. SELECT PREMCLASS
12. SELECT RI_COSTC SEGMENT5
13. SELECT EMPLOYEE SEGMENT6
14. SELECT UIM_YEAR SEGMENT7
15. SELECT INTERCO SEGMENT8

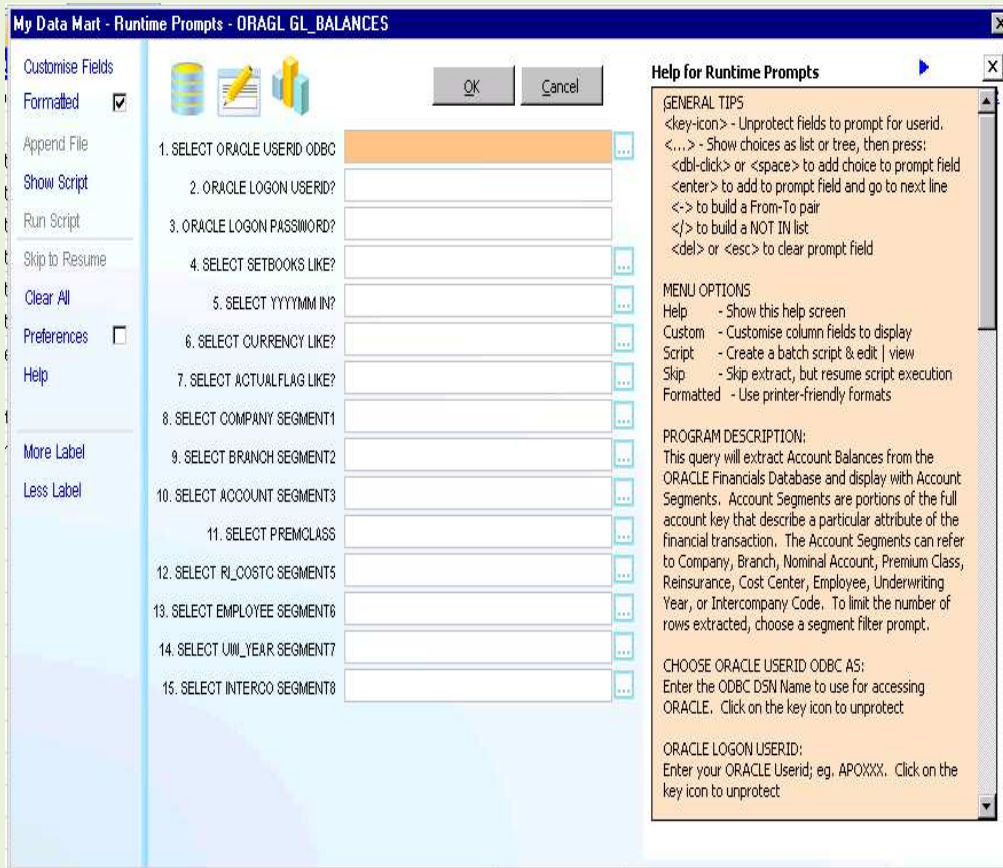
OK Cancel

In the expanded screen, the following are additional action buttons and keystrokes:

Icon/ Key	Action	Details
	Send Choice to Prompt Field	This action will send the highlighted item to the current prompt field. Repeated use of the Apply button will build a list of values separated by comma.
	Increase Font	This action will increase the font size of the list of choices.
	Close List	Close the list of choices. The Runtime Prompt screen will reduce to normal size.
a-z 	Normal Sort	This action will display the choices using normal sequence, eg, sorted by choices.
 a-z	Alternative Sort	This action will display the choices using alternative sequence, eg, sorted by description.
list1	Alternative List 1	This action will display the choices using alternative list
list2	Alternative List 2	This action will display the choices using alternative list
list3	Alternative List 3	This action will display the choices using alternative list
double-click	Send Choice to Prompt Field	This action will send the highlighted item to the current prompt field.
space-bar	Send Choice to Prompt Field	This action will send the highlighted item to the current prompt field.
enter	Send Choice to Prompt Field and go to next line	This action will send the highlighted item to the current prompt field and position to the next choice
minus-sign	Build From-To pair	This action will append the highlighted choice with the current prompt field value to build a From-To range.
/	Build a NOT IN list	This action is used to create a list where records are selected if NOT FOUND in the specified
delete	Clear the Prompt field	This action will clear the current prompt field values
escape	Clear the Prompt field	This action will clear the current prompt field values

Additional options are available in the expanded screen by right-clicking on the list area.

Some prompts allow for a single value, or a list of values (separated by a comma), or a range (from-to), or a partial keyword (eg, 8) to refer to all values beginning with the keyword. To see the available value options for the particular prompt, click on the Help button as below:



From the Runtime Prompt screen, click on OK to execute and a spreadsheet will be generated.

The columns in the spreadsheet correspond to the fields extracted from the database.

Option 2-MS SQL Server Builder

Icon	Action	Details
	Apps... System Builder... 2-MS SQL DM Builder	This action will present the automatic datamart builder for applications, ERPs, or GLs based on MS SQL Server.

A parameter screen for Runtime Prompts will be presented as follows:

Complete all details as in the example above. You can click on the Show Choices button to see the valid prompts. If you have entered prompts before, they will be remembered.

The parameter prompts are:

	Prompt	Details
1	CHOOSE MSSQL ODBC USERID	Enter the System DSN for the MS SQL Server instance
2	MSSQL LOGON USERID	Enter your MS SQL userid
3	MSSQL LOGON PASSWORD	Enter your MS SQL password
4	CHOOSE MSSQLTABLE IN	<p>Enter the range of table names that you wish to access. A range can be a list of names separated by a comma; a from-to; a name-pattern using %; or a combination of these. eg: table1, table2, table3 table10-table20 %table%</p> <p>Click on the Choices to see the list of tables names for the specified schema name.</p>
5	CHOOSE APPTITLE AS	Enter a prefix text that will uniquely identify these datamarts and menus from those created previously.

Option 3-IBM DB2 DM Builder

Icon	Action	Details
	Apps... System Builder... 3-IBM DB2 DM Builder	This action will present the automatic datamart builder for applications, ERPs, or GLs based on IBM DB2.

A parameter screen for Runtime Prompts will be presented as follows:

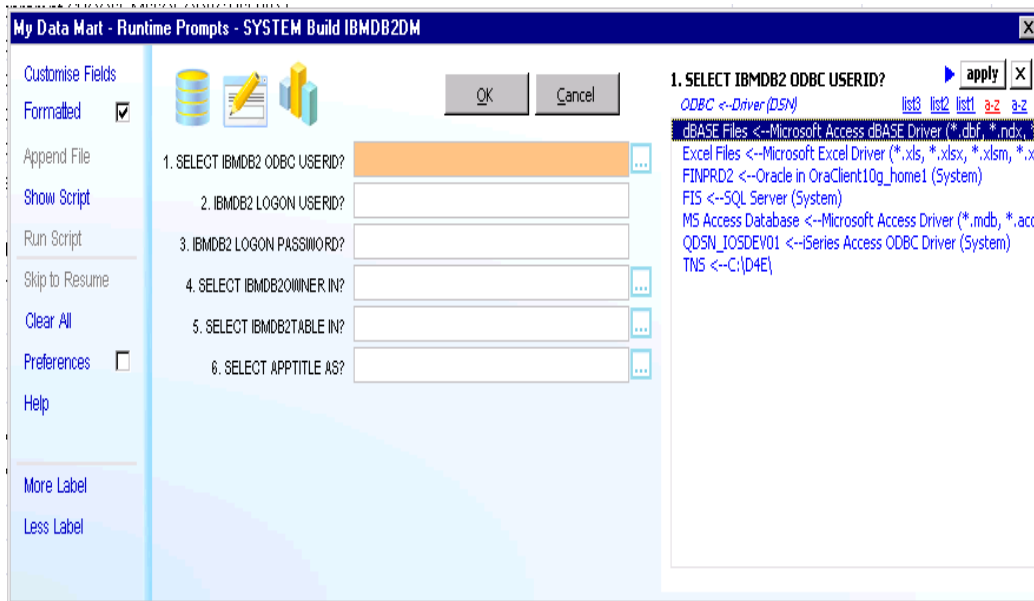
My Data Mart - Runtime Prompts - SYSTEM Build IBMDB2DM

Customise Fields
Formatted ☒
Append File
Show Script
Run Script
Skip to Resume
Clear All
Preferences ☐
Help
More Label
Less Label

1. SELECT IBMDB2 ODBC USERID? ...
2. IBMDB2 LOGON USERID?
3. IBMDB2 LOGON PASSWORD?
4. SELECT IBMDB2OWNER IN? ...
5. SELECT IBMDB2TABLE IN? ...
6. SELECT APPTITLE AS? ...

OK Cancel

Complete all details as in the example above. You can click on the Show Choices button to see the valid prompts. Click on the Show Choices button for last prompt as below:



The parameter prompts are:

	Prompt	Details
1	CHOOSE IBMDB2 ODBC USERID	Enter the System DSN for the IBM DB2 instance
2	IBMDB2 LOGON USERID	Enter your IBM DB2 userid
3	IBMDB2 LOGON PASSWORD	Enter your IBM DB2 password
4	CHOOSE IBMDB2OWNER IN	Enter the IBM DB2 schema owner of table names that you wish to access
5	CHOOSE IBMDB2TABLE IN	<p>Enter the range of table names that you wish to access. A range can be a list of names separated by a comma; a from-to; a name-pattern using %; or a combination of these. eg: table1, table2, table3 table10-table20 %table%</p> <p>Click on the Choices to see the list of tables names for the specified schema name.</p>
6	CHOOSE APPTITLE AS	Enter a prefix text that will uniquely identify these datamarts and menus from those created previously.

Option 4-IBM iSeries DM Builder

Icon	Action	Details
	Apps... System Builder... 4-IBM iSeries DM Builder	This action will present the automatic datamart builder for applications, ERPs, or GLs based on IBM iSeries DB2.

A parameter screen will be presented as follows:

Complete all details as in the example above. You can click on the Show Choices button to see the valid prompts.

The parameter prompts are:

	Prompt	Details
1	CHOOSE IBMSQL ODBC USERID	Enter the System DSN for the IBM DB2 for iSeries instance
2	IBMSQL LOGON USERID	Enter your IBM DB2 userid
3	IBMSQL LOGON PASSWORD	Enter your IBM DB2 password
4	CHOOSE IBMSQLOWNER IN	Enter the IBM DB2 schema owner of table names that you wish to access
5	CHOOSE IBMSQLTABLE IN	Enter the range of table names that you wish to access. A range can be a list of names separated by a comma; a from-to; a name-pattern using %; or a combination of these. eg: table1, table2, table3 table10-table20 %table% Click on the Choices to see the list of tables names for the specified schema name.
6	CHOOSE APPTITLE AS	Enter a prefix text that will uniquely identify these datamarts and menus from those created previously.

Option 5-MySQL DM Builder

Icon	Action	Details
	Apps... System Builder... 5-MySQL DM Builder	This action will present the automatic datamart builder for applications, ERPs, or GLs based on the freely available MySQL Database

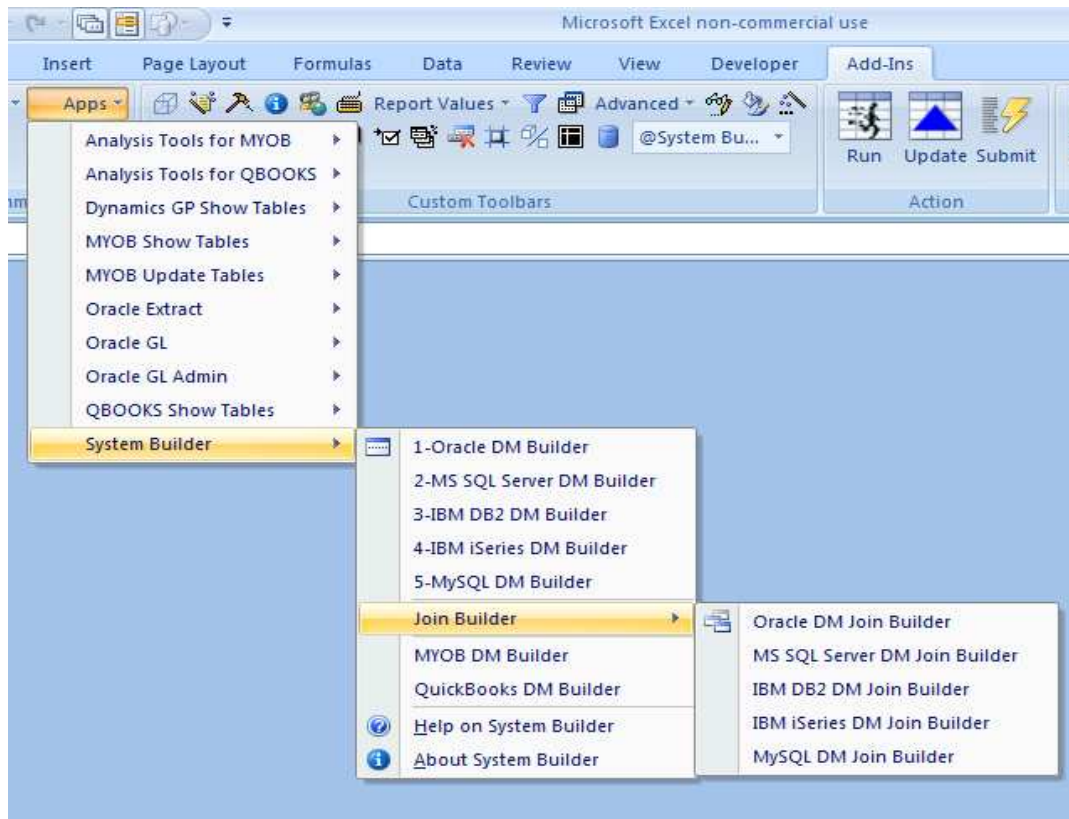
Complete all details as in the example above. You can click on the Show Choices button to see the valid values for each prompt.

The parameter prompts are:


	Prompt	Details
1	CHOOSE MYSQL ODBC USERID	Enter the System DSN for the MySQL Database
2	MYSQL LOGON USERID	Enter your MySQL userid
3	MYSQL LOGON PASSWORD	Enter your MySQL password
4	CHOOSE MYSQLSCHEMA IN	Enter the MySQL schema owner of table names that you wish to access
5	CHOOSE MYSQLTABLE IN	Enter the range of table names that you wish to access. A range can be a list of names separated by a comma; a from-to; a name-pattern using %; or a combination of these. eg: table1, table2, table3 table10-table20 %table% Click on the Choices to see the list of tables names for the specified schema name.
6	CHOOSE APPTITLE AS	Enter a prefix text that will uniquely identify these datamarts and menus from those created previously.

Sub-Menu Join Builder


Icon	Action	Details
	Apps... System Builder... Join Builder...	This action will present the additional sub-menu of options for building adhoc datamarts.

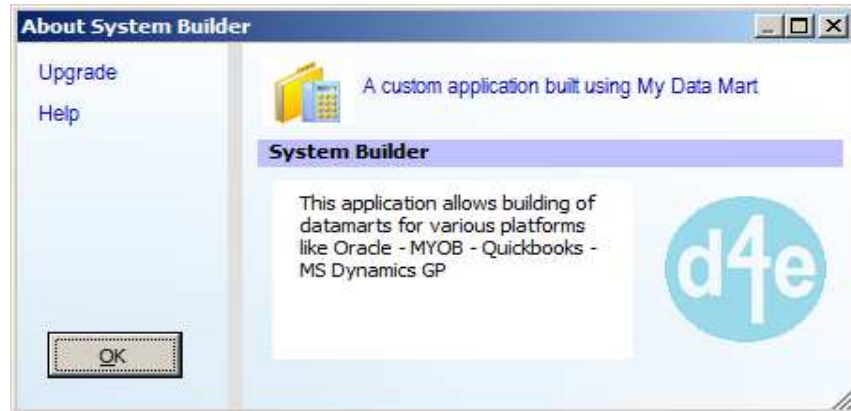


Option Help on System Builder


Icon	Action	Details
	Apps... System Builder... Help on System Builder	This action will present this document in PDF form.

Option About System Builder

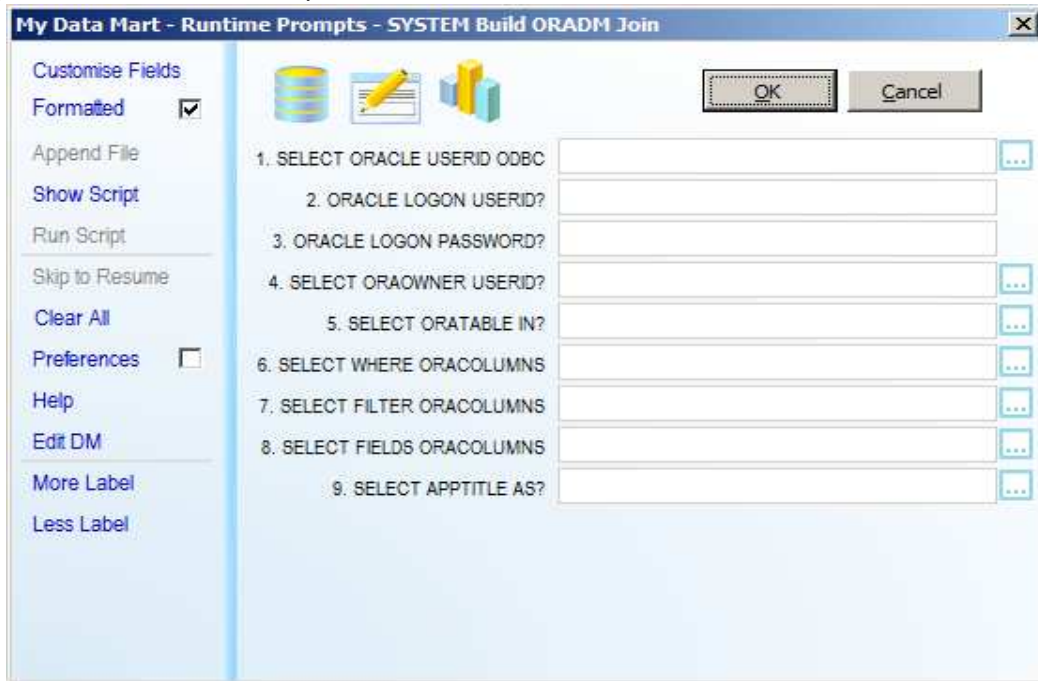
Icon	Action	Details
	Apps... System Builder... About System Builder	This action will present a brief description of the System Builder app.



Option Oracle DM Join Builder

Icon	Action	Details
	Apps... System Builder... Join Builder... Oracle DM Join Builder	This action will present the ADHOC datamart builder for Oracle database.

A parameter screen will be presented as follows:



My Data Mart - Runtime Prompts - SYSTEM Build ORADM Join

Customise Fields
Formatted ☒
Append File
Show Script
Run Script
Skip to Resume
Clear All
Preferences ☐
Help
Edit DM
More Label
Less Label

1. SELECT ORACLE USERID ODBC
2. ORACLE LOGON USERID?
3. ORACLE LOGON PASSWORD?
4. SELECT ORAOWNER USERID?
5. SELECT ORATABLE IN?
6. SELECT WHERE ORACOLUMNS
7. SELECT FILTER ORACOLUMNS
8. SELECT FIELDS ORACOLUMNS
9. SELECT APPTITLE AS?

OK Cancel

Complete all details as in the example above. You can click on the Show Choices button to see the valid values for each prompt.

The parameter prompts are:

	Prompt	Details
1	CHOOSE ORACLE USERID ODBC AS	Enter the System DSN for the Oracle Database
2	ORACLE LOGON USERID	Enter your Oracle userid
3	ORACLE LOGON PASSWORD	Enter your Oracle password
4	CHOOSE ORAOWNER USERID	Enter the Oracle schema owner of table names that you wish to access
5	CHOOSE ORATABLE IN	Enter the range of table names that you wish to access. A range can be a list of names separated by a comma. eg: table1, table2, table3 Click on the Choices to see the list of tables names for the specified schema name.
6	CHOOSE WHERE ORACOLUMNS IN	Enter a WHERE clause in the form A=B and C=D etc. Use the Choices button and double click to form the string. Use the Choices button to also indicate columns that will also be prompted as filters with Choices facility (LOV)
7	CHOOSE FILTER ORACOLUMNS IN	Enter the list of columns (separated by comma) that will indicate which ones will have a Choices facility (LOV) when used in the final datamart. Use the Choices to select items form a list.
8	CHOOSE FIELDS ORACOLUMNS IN	Enter the list of columns (separated by comma) that will displayed by the datamart viewer. Use the Choices to select items form a list.
9	CHOOSE APPTITLE AS	Enter a prefix text that will uniquely identify these datamarts and menus from those created previously.

Option MS SQL Server DM Join Builder

Icon	Action	Details
	Apps... System Builder... Join Builder... MS SQL Server DM Join Builder	This action will present the ADHOC datamart builder for MS SQL Server databases.

A parameter screen will be presented as follows:

My Data Mart - Runtime Prompts - SYSTEM Build MSSQLDM Join

Customise Fields
Formatted ☒
Append File
Show Script
Run Script
Skip to Resume
Clear All
Preferences ☐
Help
Edit DM
More Label
Less Label

1. SELECT MSSQL ODBC USERID? ...
2. MSSQL LOGON USERID?
3. MSSQL LOGON PASSWORD?
4. SELECT MSSQLSCHEMA IN? ...
5. SELECT MSSQLTABLE IN? ...
6. SELECT WHERE ...
7. SELECT FIELDS ...
8. SELECT APPTITLE AS? ...

OK Cancel

Complete all details as in the example above. You can click on the Show Choices button to see the valid values for each prompt.

The parameter prompts are:

	Prompt	Details
1	CHOOSE MSSQL ODBC USERID	Enter the System DSN for the MSSQL Database
2	MSSQL LOGON USERID	Enter your MSSQL userid
3	MSSQL LOGON PASSWORD	Enter your MSSQL password
4	CHOOSE MSSQLSCHEMA IN	Enter the MSSQL schema owner of table names that you wish to access
5	CHOOSE MSSQLTABLE IN	Enter the range of table names that you wish to access. A range can be a list of names separated by a comma. eg: table1, table2, table3 Click on the Choices to see the list of tables names for the specified schema name.
6	CHOOSE WHERE MSSQLCOLUMNS IN	Enter a WHERE clause in the form A=B and C=D etc. Use the Choices button and double click to form the string. Use the Choices button to also indicate columns that will also be prompted as filters with Choices facility (LOV)
7	CHOOSE FIELDS MSSQLCOLUMNS IN	Enter the list of columns (separated by comma) that will displayed by the datamart viewer. Use the Choices to select items form a list.
8	CHOOSE APPTITLE AS	Enter a prefix text that will uniquely identify these datamarts and menus from those created previously.

Option IBM DB2 DM Join Builder

Icon	Action	Details
	Apps... System Builder... Join Builder... IBM DB2 DM Join Builder	This action will present the ADHOC datamart builder for IBM DB2 databases.

A parameter screen will be presented as follows:

My Data Mart - Runtime Prompts - SYSTEM Build IBMDB2DM Join

Customise Fields
Formatted ☒
Append File
Show Script
Run Script
Skip to Resume
Clear All
Preferences ☐
Help
Edit DM
More Label
Less Label

1. SELECT IBMDB2 ODBC USERID?

2. IBMDB2 LOGON USERID?

3. IBMDB2 LOGON PASSWORD?

4. SELECT IBMDB2OWNER

5. SELECT IBMDB2TABLE IN?

6. SELECT WHERE

7. SELECT FIELDS

8. SELECT APPTITLE AS?

OK Cancel

Complete all details as in the example above. You can click on the Show Choices button to see the valid values for each prompt.

The parameter prompts are:

	Prompt	Details
1	CHOOSE IBMDB2 ODBC USERID	Enter the System DSN for the IBMDB2 Database
2	IBMDB2 LOGON USERID	Enter your IBMDB2 userid
3	IBMDB2 LOGON PASSWORD	Enter your IBMDB2 password
4	CHOOSE IBMDB2OWNER USERID	Enter the IBMDB2 schema owner of table names that you wish to access
5	CHOOSE IBMDB2TABLE IN	Enter the range of table names that you wish to access. A range can be a list of names separated by a comma. eg: table1, table2, table3 Click on the Choices to see the list of tables names for the specified schema name.
6	CHOOSE WHERE IBMDB2COLUMNS IN	Enter a WHERE clause in the form A=B and C=D etc. Use the Choices button and double click to form the string. Use the Choices button to also indicate columns that will also be prompted as filters with Choices facility (LOV)
7	CHOOSE FIELDS IBMDB2COLUMNS IN	Enter the list of columns (separated by comma) that will displayed by the datamart viewer. Use the Choices to select items form a list.
8	CHOOSE APPTITLE AS	Enter a prefix text that will uniquely identify these datamarts and menus from those created previously.

Option IBM iSeries DM Join Builder

Icon	Action	Details
	Apps... System Builder... Join Builder... IBM iSeries DM Join Builder	This action will present the ADHOC datamart builder for IBM iSeries databases.

A parameter screen will be presented as follows:

My Data Mart - Runtime Prompts - SYSTEM Build IBMSQLDM Join

Customise Fields
Formatted ☒
Append File
Show Script
Run Script
Skip to Resume
Clear All
Preferences ☐
Help
Edit DM
More Label
Less Label

1. SELECT IBMSQL ODBC USERID? ...

2. IBMSQL LOGON USERID?

3. IBMSQL LOGON PASSWORD?

4. SELECT IBMSQLOWNER ...

5. SELECT IBMSQLTABLE IN? ...

6. SELECT WHERE ...

7. SELECT FIELDS ...

8. SELECT APPTITLE AS? ...

OK Cancel

Complete all details as in the example above. You can click on the Show Choices button to see the valid values for each prompt.

The parameter prompts are:

	Prompt	Details
1	CHOOSE IBMSQL ODBC USERID	Enter the System DSN for the IBMSQL Database
2	IBMSQL LOGON USERID	Enter your IBMSQL userid
3	IBMSQL LOGON PASSWORD	Enter your IBMSQL password
4	CHOOSE IBMSQLOWNER USERID	Enter the IBMSQL schema owner of table names that you wish to access
5	CHOOSE IBMSQLTABLE IN	Enter the range of table names that you wish to access. A range can be a list of names separated by a comma. eg: table1, table2, table3 Click on the Choices to see the list of tables names for the specified schema name.
6	CHOOSE WHERE IBMSQLCOLUMNS IN	Enter a WHERE clause in the form A=B and C=D etc. Use the Choices button and double click to form the string. Use the Choices button to also indicate columns that will also be prompted as filters with Choices facility (LOV)
7	CHOOSE FIELDS IBMSQLCOLUMNS IN	Enter the list of columns (separated by comma) that will displayed by the datamart viewer. Use the Choices to select items form a list.
8	CHOOSE APPTITLE AS	Enter a prefix text that will uniquely identify these datamarts and menus from those created previously.

Option MySQL DM Join Builder

Icon	Action	Details
	Apps... System Builder... Join Builder... MySQL DM Join Builder	This action will present the ADHOC datamart builder for MySQL databases.

A parameter screen will be presented as follows:

My Data Mart - Runtime Prompts - SYSTEM Build MYSQLDM Join

Customise Fields
Formatted ☒
Append File
Show Script
Run Script
Skip to Resume
Clear All
Preferences ☐
Help
Edit DM
More Label
Less Label

1. SELECT MYSQL ODBC USERID? ...

2. MYSQL LOGON USERID?

3. MYSQL LOGON PASSWORD?

4. SELECT MYSQLSCHEMA IN? ...

5. SELECT MYSQLTABLE IN? ...

6. SELECT WHERE ...

7. SELECT FILTER ...

8. SELECT FIELDS ...

9. SELECT APPTITLE AS? ...

OK Cancel

Complete all details as in the example above. You can click on the Show Choices button to see the valid values for each prompt.

The parameter prompts are:

	Prompt	Details
1	CHOOSE MYSQL ODBC USERID	Enter the System DSN for the MYSQL Database
2	MYSQL LOGON USERID	Enter your MYSQL userid
3	MYSQL LOGON PASSWORD	Enter your MYSQL password
4	CHOOSE MYSQLSCHEMA IN	Enter the MYSQL schema owner of table names that you wish to access
5	CHOOSE MYSQLTABLE IN	<p>Enter the range of table names that you wish to access. A range can be a list of names separated by a comma. eg: table1, table2, table3</p> <p>Click on the Choices to see the list of tables names for the specified schema name.</p>
6	CHOOSE WHERE MYSQLCOLUMNS IN	<p>Enter a WHERE clause in the form A=B and C=D etc. Use the Choices button and double click to form the string.</p> <p>Use the Choices button to also indicate columns that will also be prompted as filters with Choices facility (LOV)</p>
7	CHOOSE FILTER MYSQLCOLUMNS IN	<p>Enter the list of columns (separated by comma) that will indicate which ones will have a Choices facility (LOV) when used in the final datamart. Use the Choices to select items form a list.</p>
8	CHOOSE FIELDS MYSQLCOLUMNS IN	<p>Enter the list of columns (separated by comma) that will displayed by the datamart viewer. Use the Choices to select items form a list.</p>
9	CHOOSE APPTITLE AS	Enter a prefix text that will uniquely identify these datamarts and menus from those created previously.

Step-by-Step Example of How to Use the System Builder

This section will provide step-by-step examples of how you can use the System Builder to build easy-to-use datamart viewers. The examples will utilise the MySQL database with a sample application. MySQL database is freely available (<http://dev.mysql.com/downloads/>) and comes with a example set of databases of World cities and countries. This schema is called WORLD and has 3 tables CITY, COUNTRY, and COUNTRYLANGUAGES

The examples will also show how the generated datamarts are incorporated into the Program Library. This step is normally a Developer responsibility, and requires more action when done during Production phase.

EXAMPLE 1: Creating Multiple Table Viewers Automatically

Example 1 will provide a step-by-step example of how you can use the System Builder to automatically build many easy-to-use datamart viewers from individual tables. The example will utilise the MySQL database with a sample application of databases of world cities and countries. This example schema is called WORLD and has 3 tables CITY, COUNTRY, and COUNTRYLANGUAGES

The objective is to create one datamart viewer for each table in the WORLD schema. These mean 3 datamarts plus a menu facility in Excel that allows each datamart to be executed by the end-user. For this example, we will identify the generated menus using a prefix name of WORLD_EX1.

Step 1 - Execute System Builder for Automatic Mode

Go To Option 5-MySQL DM Builder

Icon	Action	Details
	Apps... System Builder... 5-MySQL DM Builder	This action will present the automatic datamart builder for applications, ERPs, or GLs based on the freely available MySQL Database

My Data Mart - Runtime Prompts - SYSTEM Build MYSQLDM

Customise Fields
Formatted ☒
Append File
Show Script
Run Script
Skip to Resume
Clear All
Preferences ☐
Help
Edit DM
More Label
Less Label

1. SELECT MYSQL ODBC USERID?

2. MYSQL LOGON USERID?

3. MYSQL LOGON PASSWORD?

4. SELECT MYSQLSCHEMA IN?

5. SELECT MYSQLTABLE IN?

6. SELECT APPTITLE AS?

OK Cancel

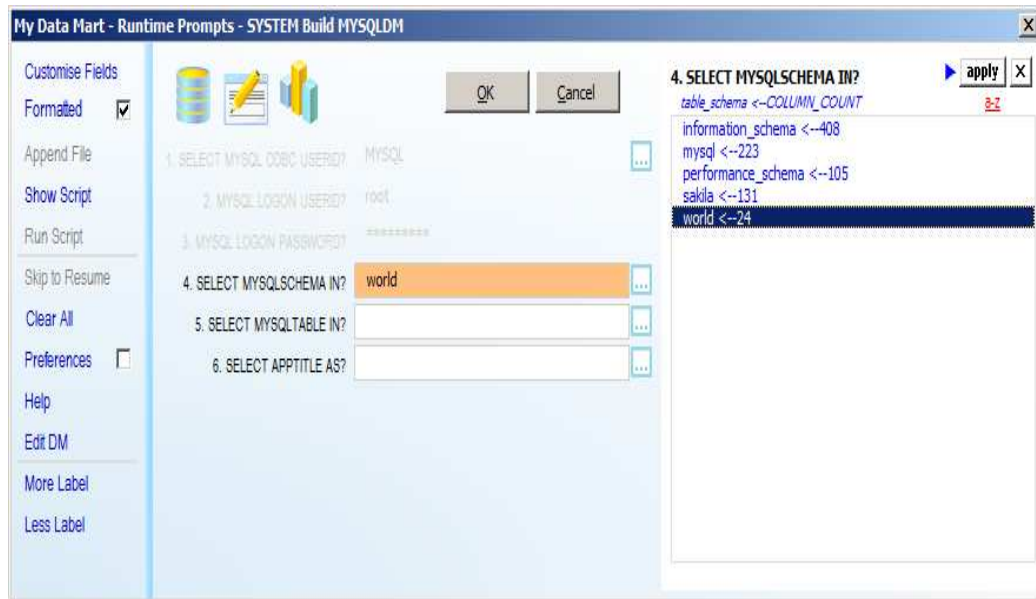
Step 2 - Complete All Details

Complete all details as in the example above. You can click on the Show Choices button to see the valid values for each prompt.

The parameter prompts are:

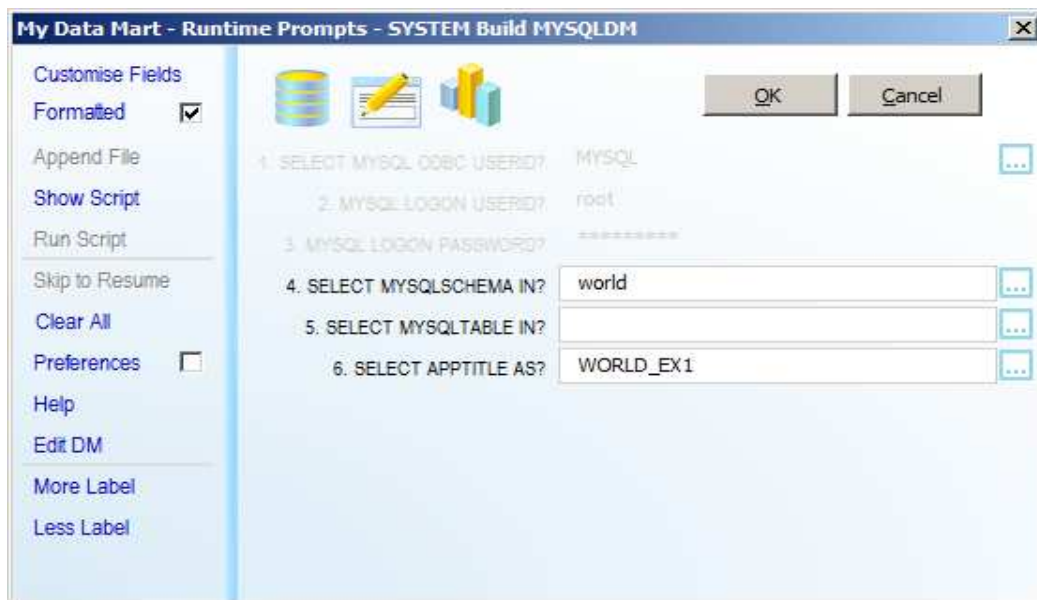
	Prompt	Details
1	CHOOSE MYSQL ODBC USERID	Enter the System DSN for the MySQL Database
2	MYSQL LOGON USERID	Enter your MySQL userid, eg ROOT
3	MYSQL LOGON PASSWORD	Enter your MySQL password, eg PASSWORD
4	CHOOSE MYSQLSCHEMA IN	Enter the MySQL schema owner of table names that you wish to access
5	CHOOSE MYSQLTABLE IN	<p>Enter the range of table names that you wish to access. A range can be a list of names separated by a comma; a from-to; a name-pattern using %; or a combination of these. eg: table1, table2, table3 table10-table20 %table%</p> <p>Click on the Choices to see the list of tables names for the specified schema name.</p>
6	CHOOSE APPTITLE AS	Enter a prefix text that will uniquely identify these datamarts and menus from those created previously.

For parameter prompt 4, click on Choices to see the available schema for userid ROOT

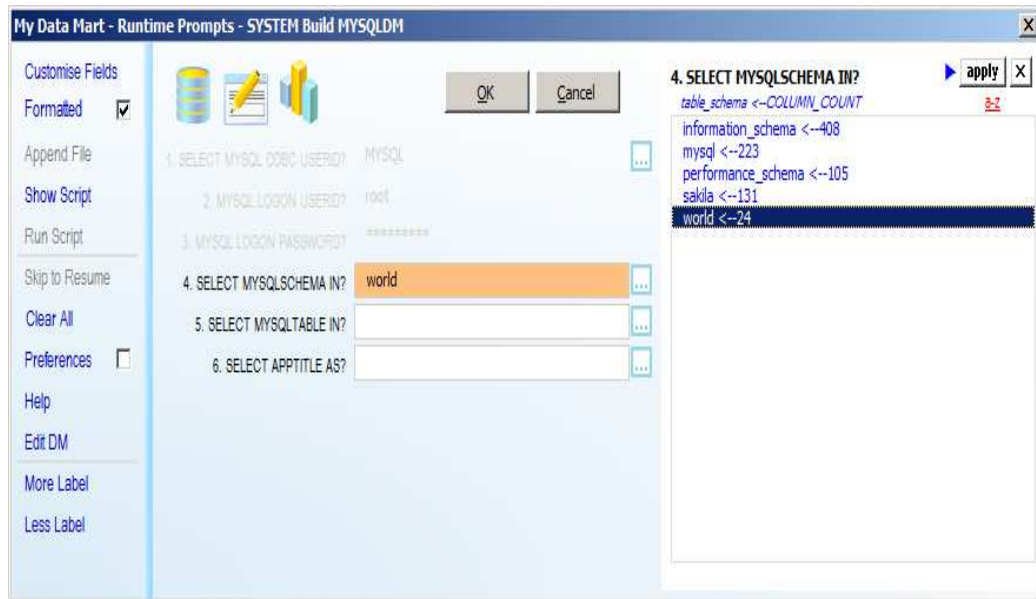


Double-click on WORLD to select.

For parameter prompt 6, enter WORLD_EX1 as our menu title prefix.



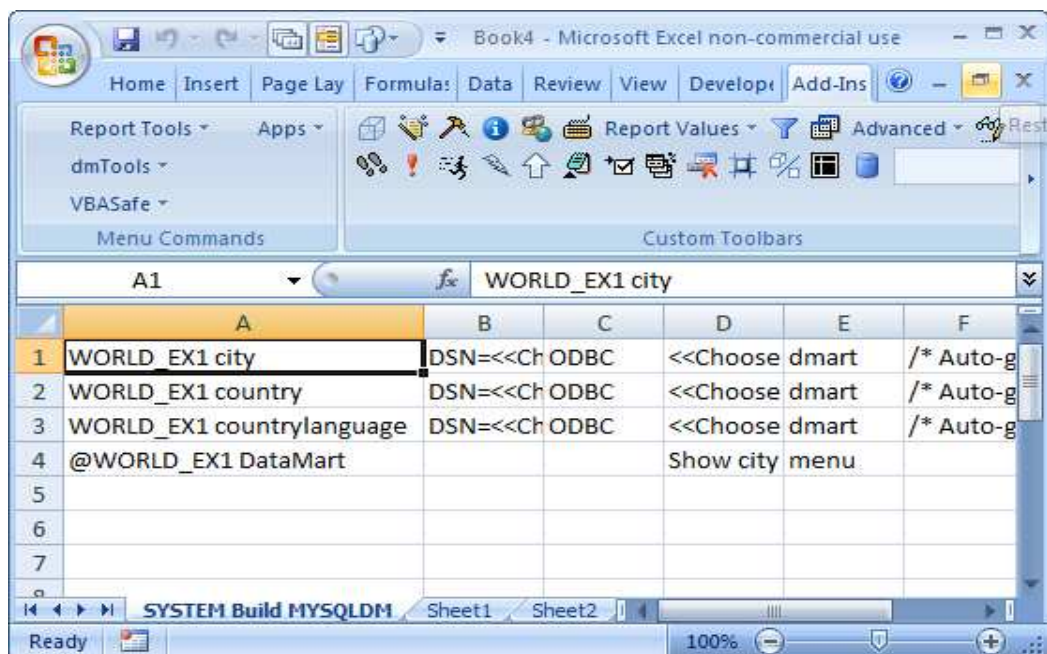
For parameter prompt 5, click on Choices to see the available tables for selected schema.



In this case, leave parameter prompt 5 as blanks to select all tables to be automatically generated as data viewers.



Click OK when all details have been entered.

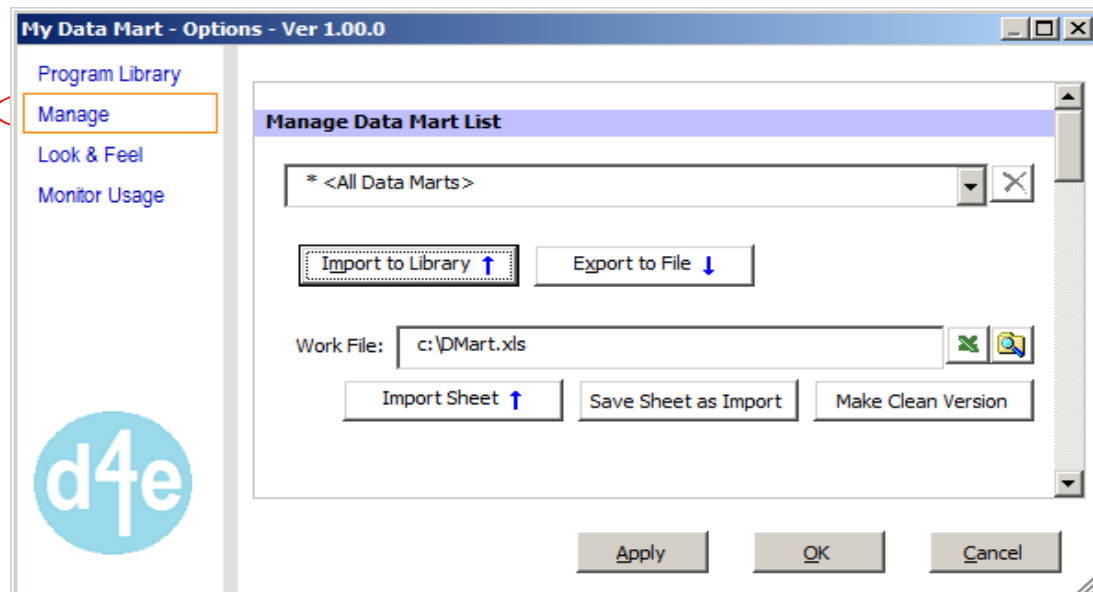
The following spreadsheet will be generated:



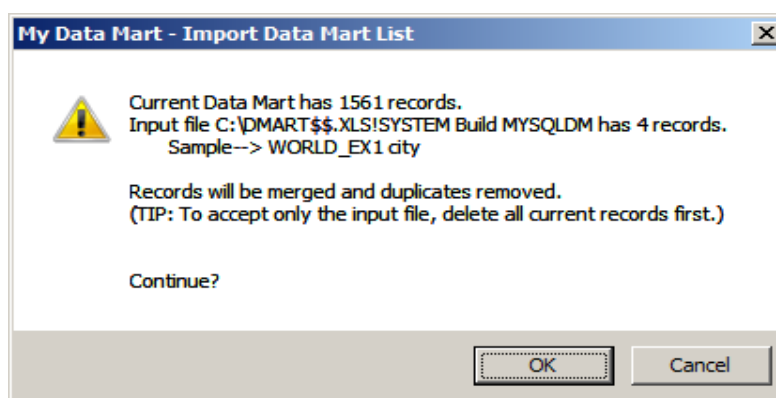
Step 3 - Upload the Datamart Definitions

Go To Option d4e Options

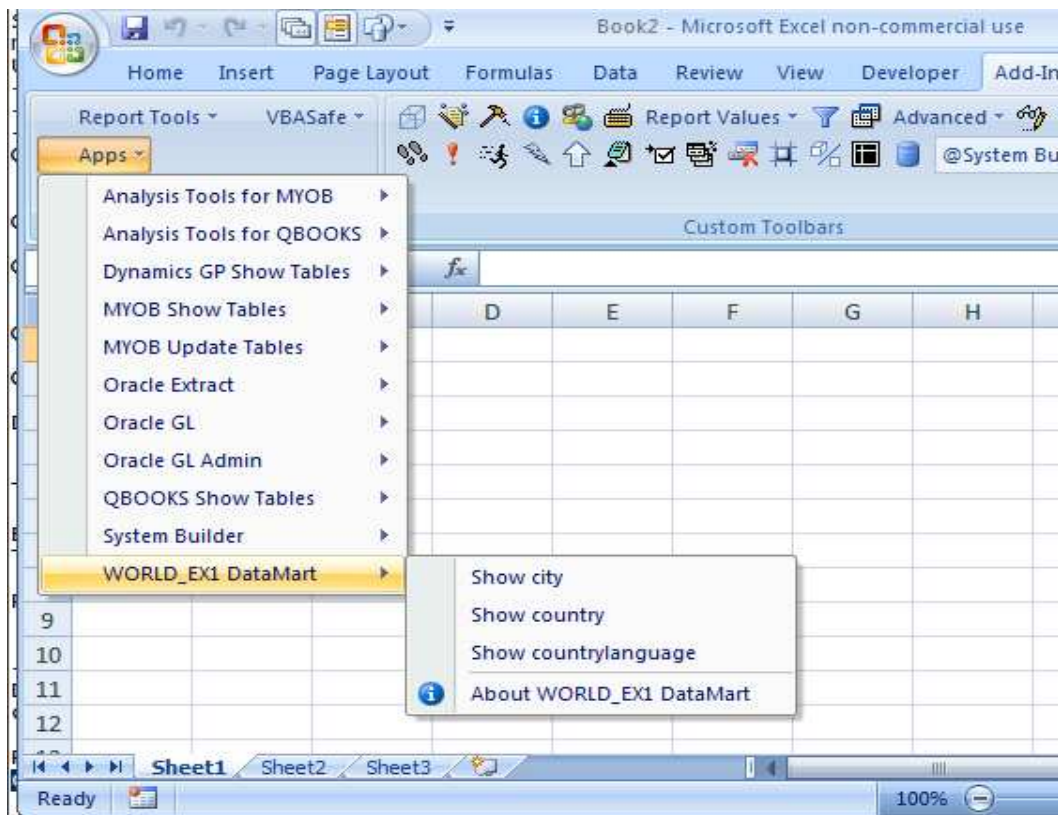
Icon	Action	Details
	dmTools...	This action will upload the current sheet contain Datamart definitions and add to the current Program Library.
	d4e Options...	
	Manage...	
	Import Sheet	



Click OK to confirm upload to the current Program Library (Data Mart List):



Close all messages and re-start Excel. The new datamarts will be available including the menu option showing the new datamarts.



Step 4 - Run the New Reports

Go To Option Show City

Icon	Action	Details
	Apps... WORLD_EX1 DataMart... Show city	This action will report on the contents of the CITY table.

A parameter screen will be presented as follows:

Click OK and a spreadsheet will be created as follows:

	A	B	C	D	E
	CountryCode	District	ID	Name	Population
2	AFG	Kabul	1	Kabul	1780000
3	AFG	Qandahar	2	Qandahar	237500
4	AFG	Herat	3	Herat	186800
5	AFG	Balkh	4	Mazar-e-Sharif	127800

Go To Option Show Country


Icon	Action	Details
	Apps... WORLD_EX1 DataMart... Show country	This action will report on the contents of the COUNTRY table.

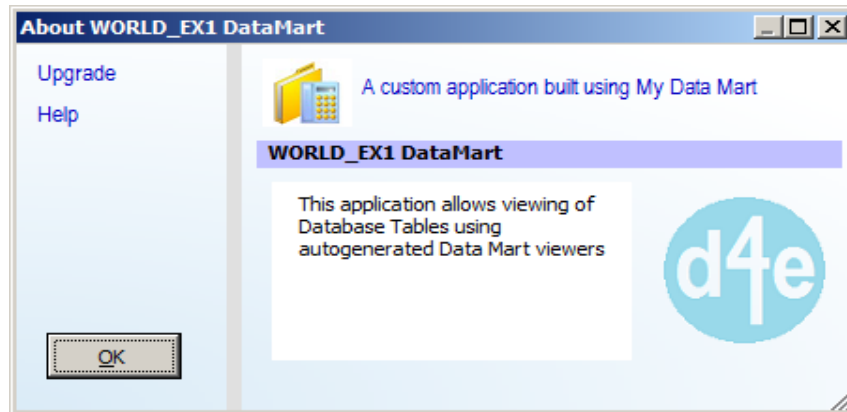
A parameter screen will be presented as follows:

Click OK and a spreadsheet will be created as follows:

	Capital	Code	Code2	Continent	GNP	GNPold	GovernmentForm
1	Capital						
2	129	ABW	AW	North America	828	793	Nonmetropolitan Territory
3	1	AFG	AF	Asia	5976		Islamic Emirate
4	56	AGO	AO	Africa	6648	7984	Republic
5	62	AIA	AI	North America	63.2		Dependent Territory of the

Go To Option About WORLD_EX1 DataMart

Icon	Action	Details
	Apps... WORLD_EX1 DataMart... About WORLD_EX1 DataMart	This action will show the About screen for the WORLD_EX1 app



EXAMPLE 2: Creating an ADHOC Viewer of Two or More Joined Tables

Example 2 will provide a step-by-step example of how you can use the System Builder to build easy-to-use adhoc or customised datamart viewers from combinations (JOIN) of tables. The example will utilise the MySQL database with a sample application of databases of world cities and countries. This example schema is called WORLD and has 3 tables CITY, COUNTRY, and COUNTRYLANGUAGES

The objective is to create a datamart viewer that extracts data from the CITY table and the COUNTRY table in the WORLD schema. The CITY table is joined with the COUNTRY table using the value of COUNTRY_CODE, so that for every CITY name, we can also get the corresponding COUNTRY name/region/population/etc. This is a common problem with database applications whose schemas are normalised (optimised for storage) and need to be joined to get all relevant and connected information.

In this example, we will need to specify the two tables CITY and COUNTRY to be joined as well as the key (COUNTRYCODE) that connects them together in a WHERE condition. Also, we will identify the generated datamarts and menus using a prefix names of WORLD_EX2.

As part of customising the datamart, we are also able to specify additional facility to limit the extract of information from the joined tables. This is done by specifying columns that will be used as the basis for filtering information. We will specify the column CITY.NAME as the basis of a filter prompt. By doing so, the generated datamart viewer will prompt the end-user for a range of CITY names to limit the results.

Step 1 - Execute System Builder for ADHOC Datamarts**Go To Option MySQL DM Join Builder**

Icon	Action	Details
	Apps... System Builder... Join Builder... MySQL DM Join Builder	This action will present the ADHOC datamart builder for applications, ERPs, or GLs based on the freely available MySQL Database

My Data Mart - Runtime Prompts - SYSTEM Build MYSQLDM Join

Customise Fields
Formatted ☒
Append File
Show Script
Run Script
Skip to Resume
Clear All
Preferences ☐
Help
Edit DM
More Label
Less Label

1. SELECT MYSQL ODBC USERID? MYSQL

2. MYSQL LOGIN USERID? root

3. MYSQL LOGIN PASSWORD? *****

4. SELECT MYSQLSCHEMA IN?

5. SELECT MYSQLTABLE IN?

6. SELECT WHERE

7. SELECT FILTER

8. SELECT FIELDS

9. SELECT APPTITLE AS?

OK Cancel

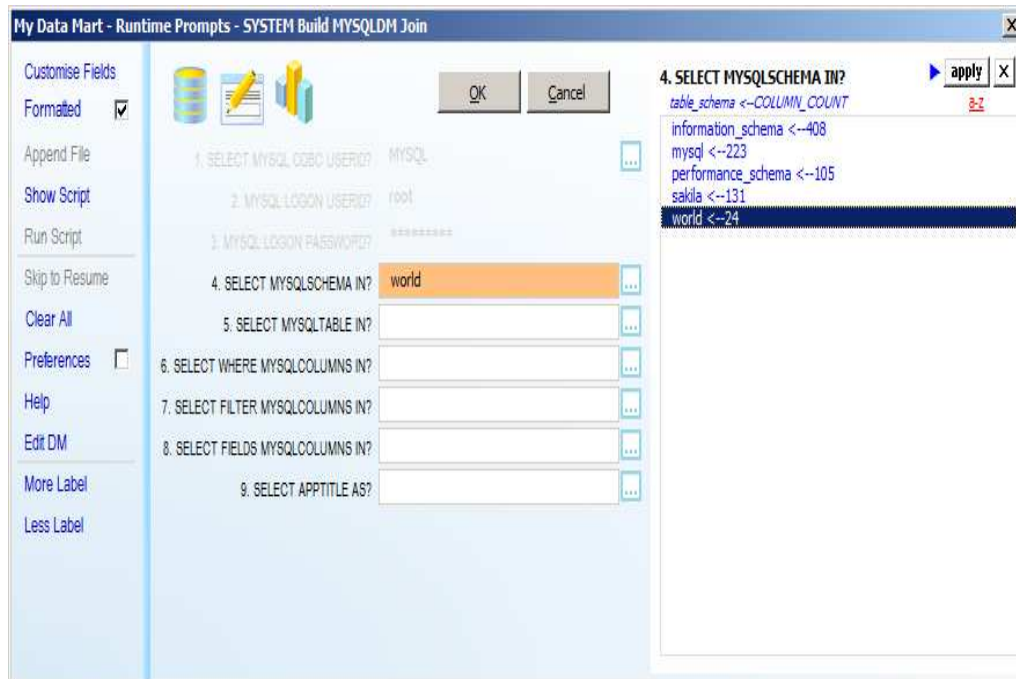
Step 2 - Complete All Details

Complete all details as in the example above. You can click on the Show Choices button to see the valid values for each prompt.

The parameter prompts are:

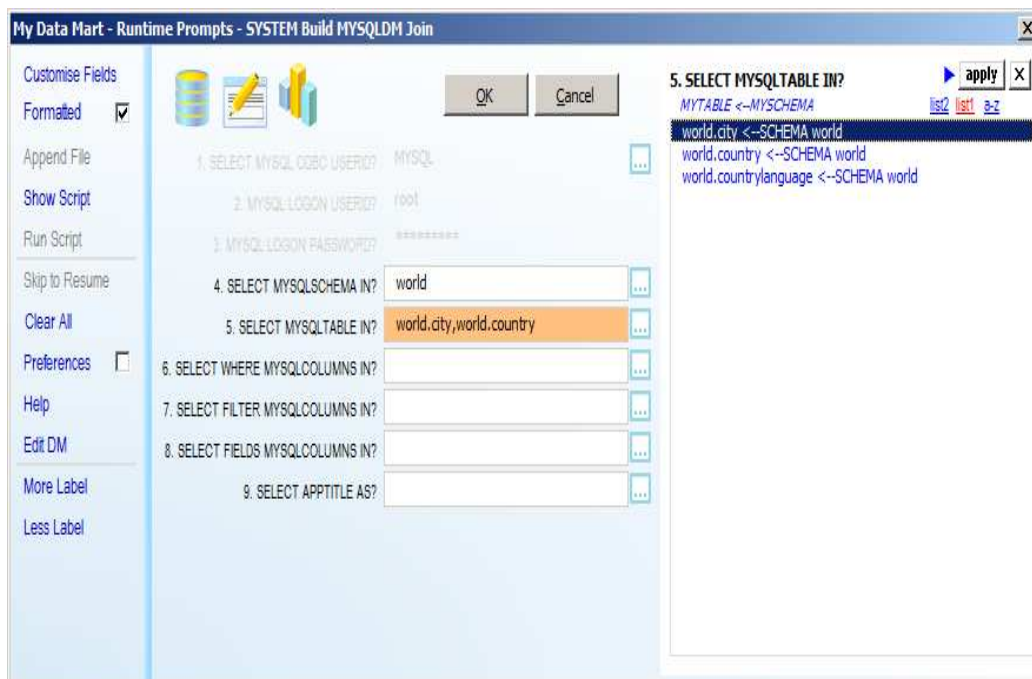
	Prompt	Details
1	CHOOSE MYSQL ODBC USERID	Enter the System DSN for the MYSQL Database
2	MYSQL LOGON USERID	Enter your MYSQL userid
3	MYSQL LOGON PASSWORD	Enter your MYSQL password
4	CHOOSE MYSQLSCHEMA IN	Enter the MYSQL schema owner of table names that you wish to access
5	CHOOSE MYSQLTABLE IN	<p>Enter the range of table names that you wish to access. A range can be a list of names separated by a comma. eg: table1, table2, table3</p> <p>Click on the Choices to see the list of tables names for the specified schema name.</p>
6	CHOOSE WHERE MYSQLCOLUMNS IN	<p>Enter a WHERE clause in the form A=B and C=D etc. Use the Choices button and double click to form the string.</p> <p>Use the Choices button to also indicate columns that will also be prompted as filters with Choices facility (LOV)</p>
7	CHOOSE FILTER MYSQLCOLUMNS IN	<p>Enter the list of columns (separated by comma) that will indicate which ones will have a Choices facility (LOV) when used in the final datamart. Use the Choices to select items form a list.</p>
8	CHOOSE FIELDS MYSQLCOLUMNS IN	<p>Enter the list of columns (separated by comma) that will displayed by the datamart viewer. Use the Choices to select items form a list.</p>
9	CHOOSE APPTITLE AS	Enter a prefix text that will uniquely identify these datamarts and menus from those created previously.

For parameter prompt 4, click on Choices to see the available schema for userid ROOT

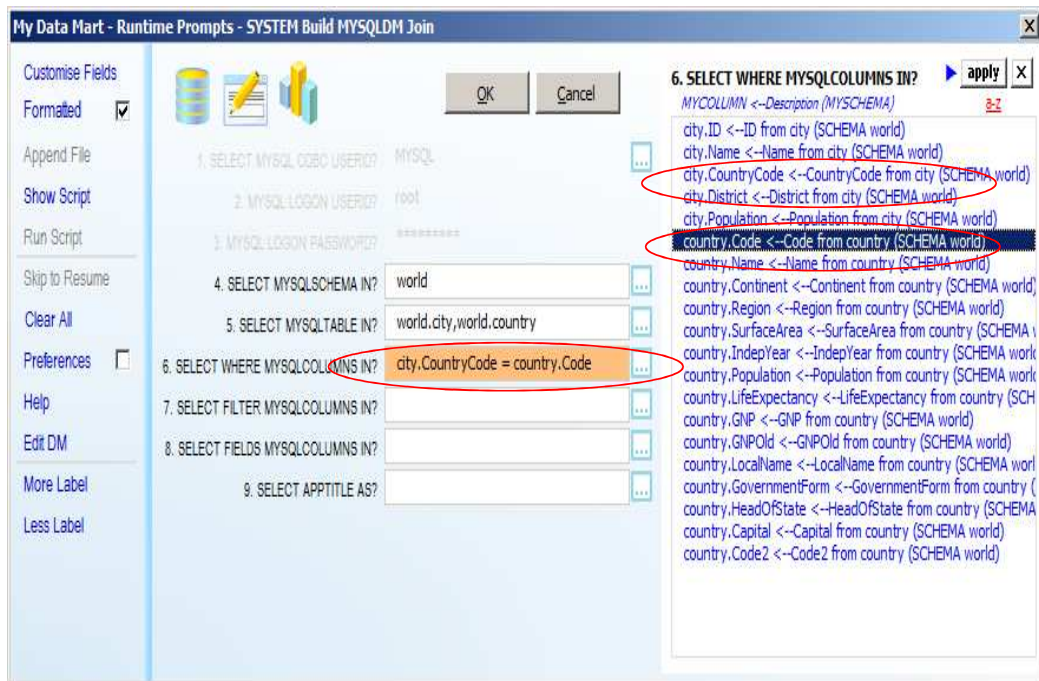


Double-click on WORLD to select.

For parameter prompt 5, click on Choices, click on list1, and double-click on WORLD.CITY and WORLD.COUNTRY

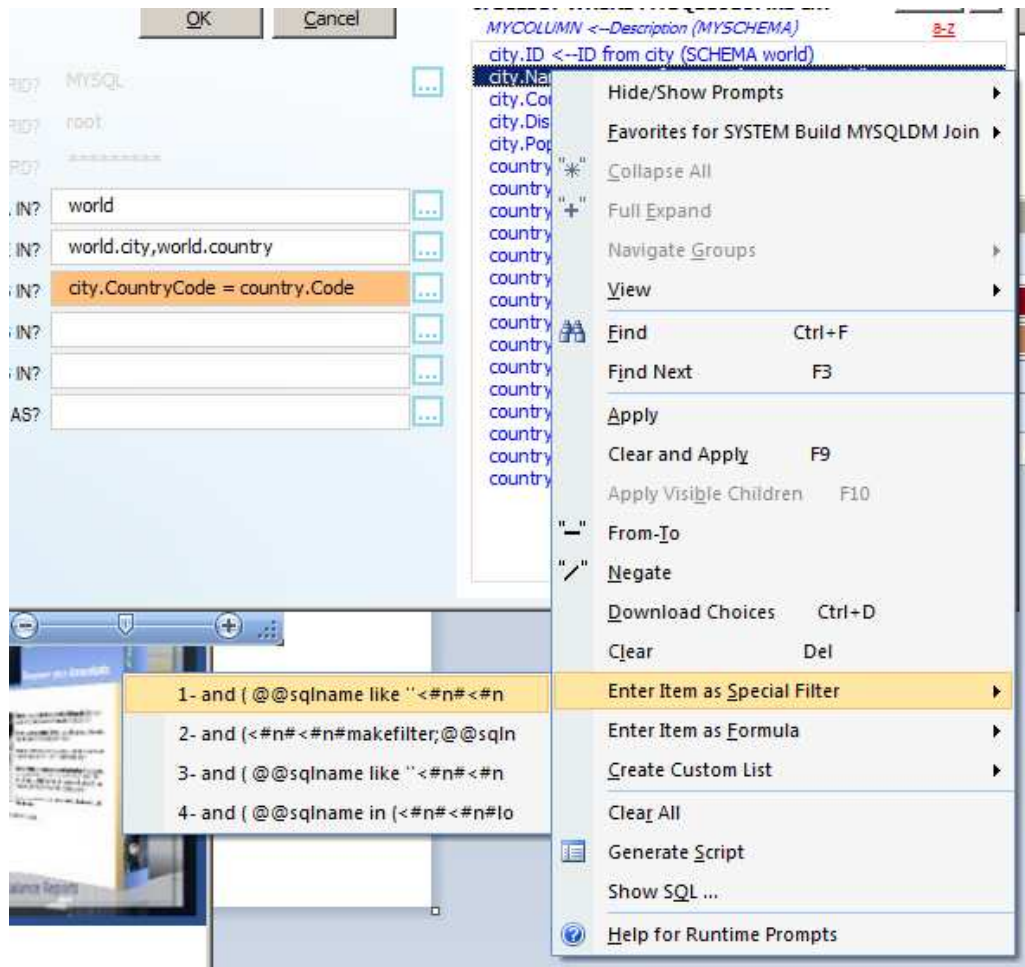


For parameter prompt 6, click on Choices to see the available tables for selected schema. Double-click on city.CountryCode and country.Code.



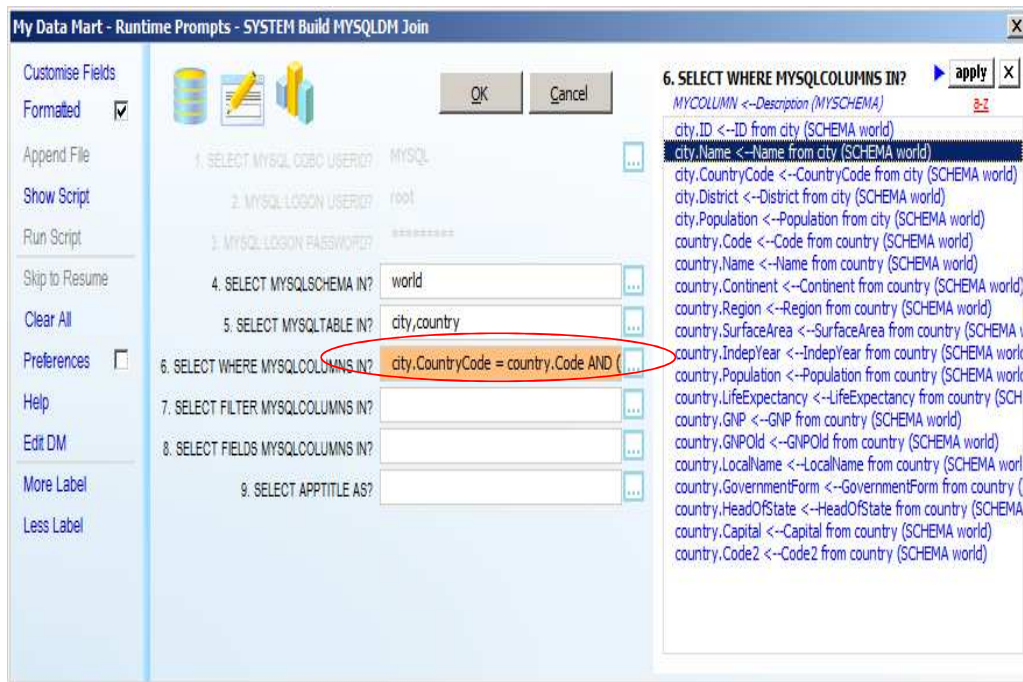
Next, choose city.Name as the end-user Special Filter prompt. This means, the end-user will be presented with a filter prompt to limit the results based on city.Name. Multiple Special Filters can be chosen.

Click on city.Name. Right-click to show other options:



Icon	Action	Details
	right-click... Enter Item as Special Filter... 1- and (@@sqlname	This action will nominate the selected item (city.Name) as a Special Filter, ie, the end-user will be presented with a prompt to choose a range of city.Name values to extract.

After selection, additional information will be placed in parameter prompt 6.

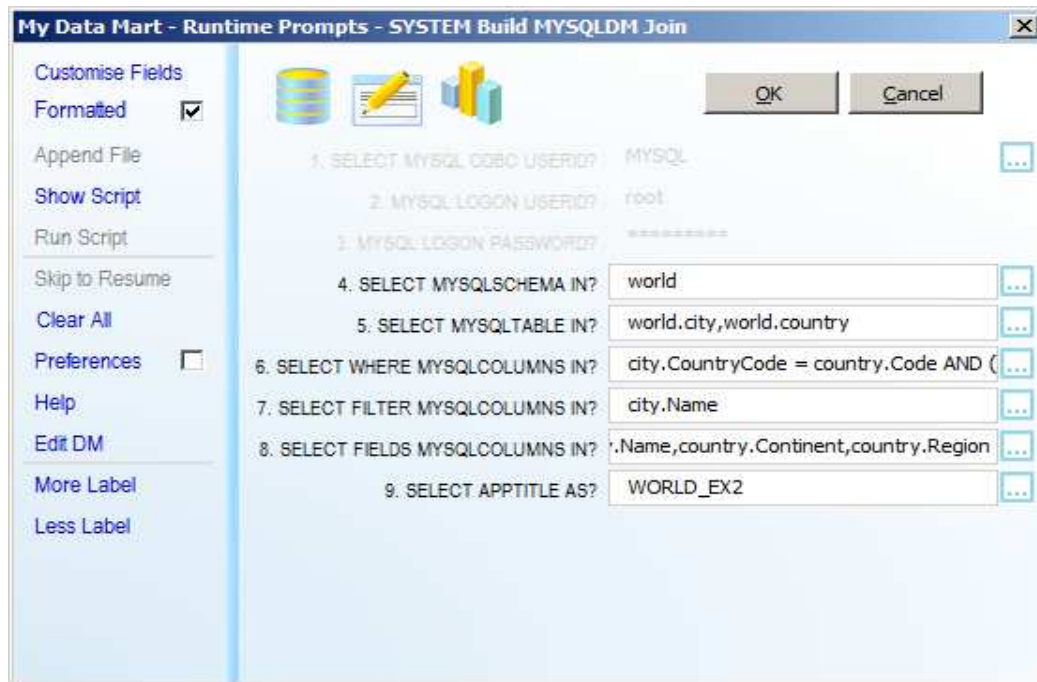


For parameter prompt 7, enter a list of columns that will be used as Special Filter and will need a Choices facility. The end-user will see this column as a Special Filter and will need to click on the Choices button to generate a list of possible values.

From the Choices menu, double-click on city.Name

For parameter prompt 8, enter the list of column names that will be presented to the end-user. Click on Choices to select values.

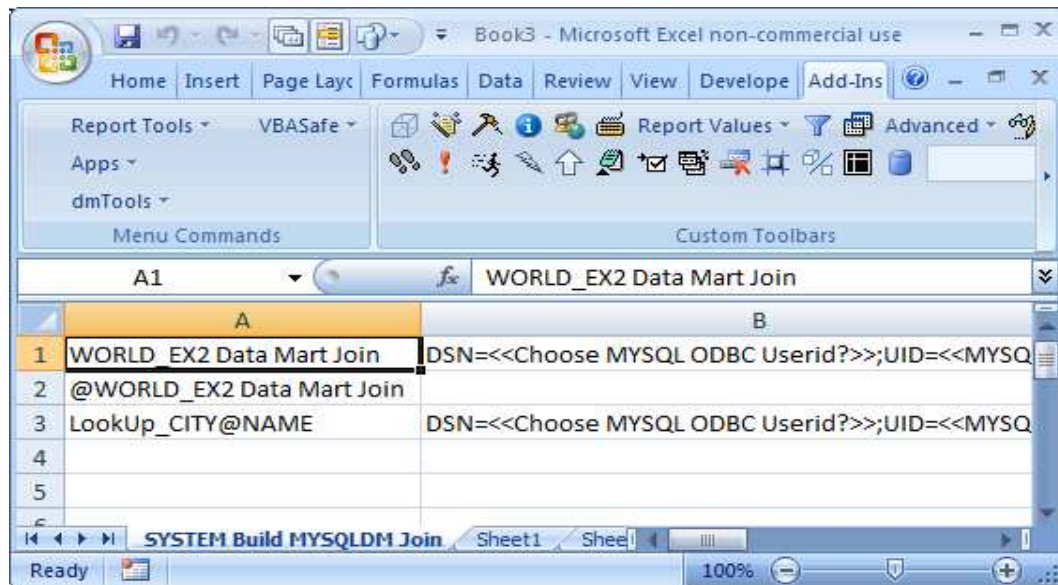
From the Choices menu, double-click on city.Name, city.Population, country.Code, country.Name, country.Continent, country.Region



For parameter prompt 9, enter WORLD_EX2.

Click OK when all details have been entered.



The following spreadsheet will be generated:

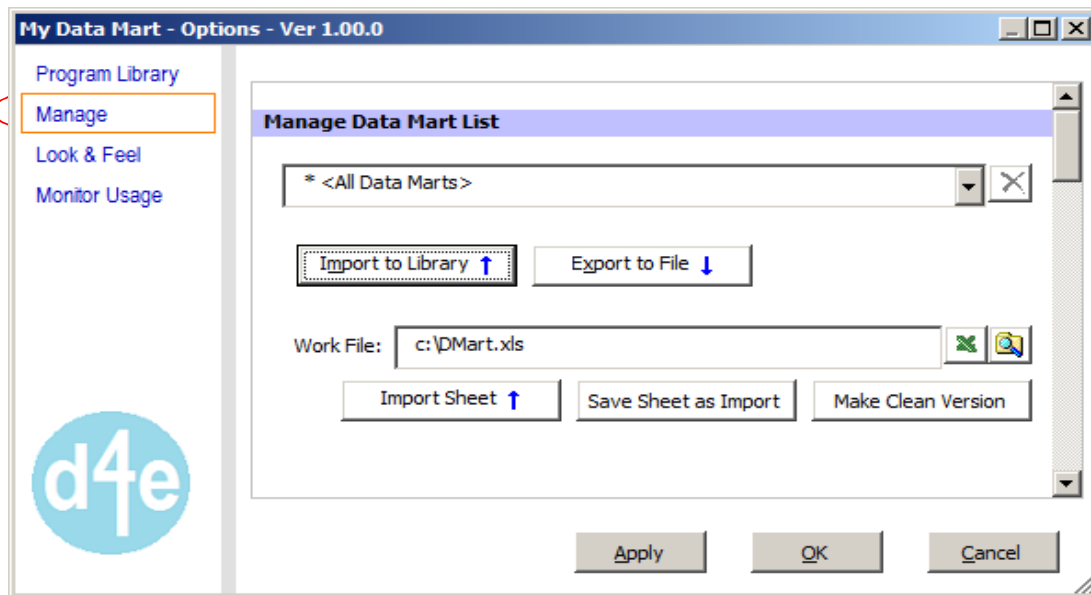


	A	B
1	WORLD_EX2 Data Mart Join	DSN=<<Choose MYSQL ODBC Userid?>>;UID=<<MYSQL
2	@WORLD_EX2 Data Mart Join	
3	LookUp_CITY@NAME	DSN=<<Choose MYSQL ODBC Userid?>>;UID=<<MYSQL
4		
5		

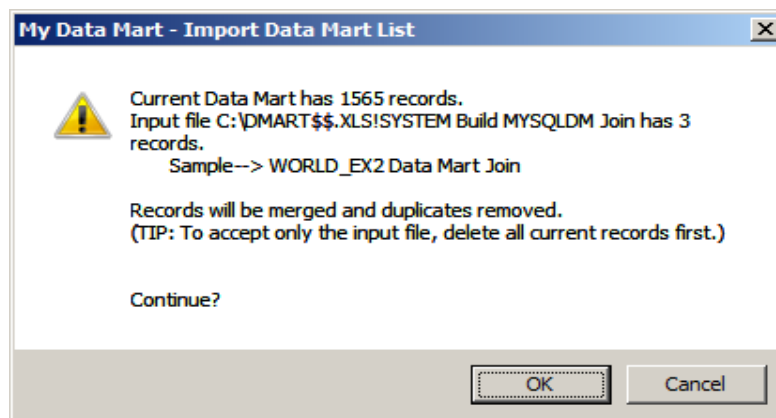
Step 3 - Upload the Datamart Definitions

Go To Option d4e Options

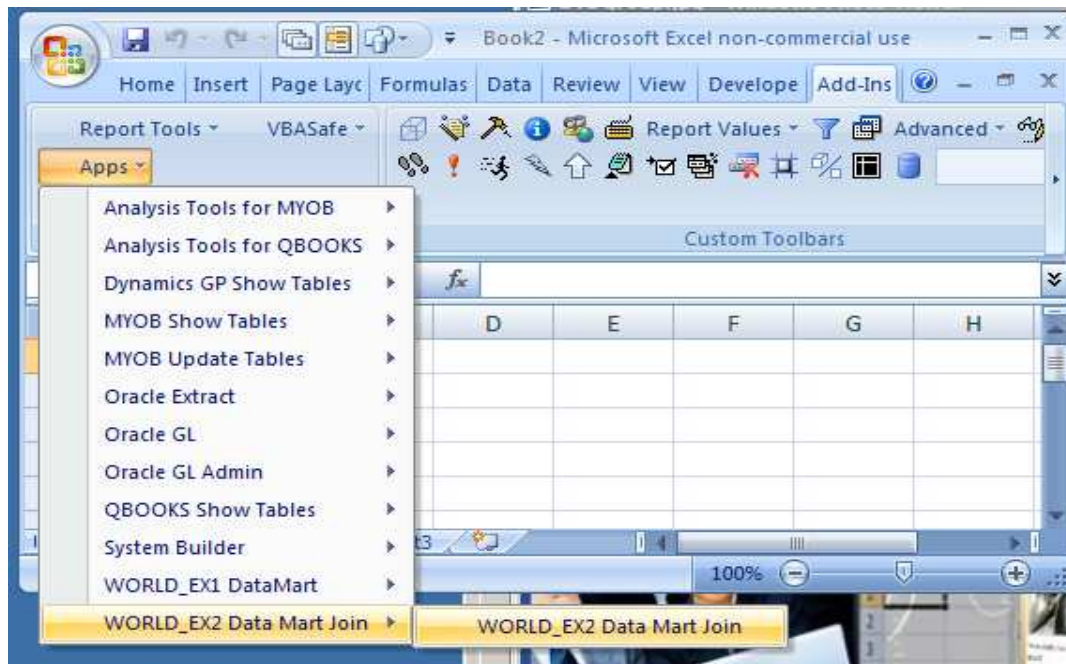
Icon	Action	Details
	dmTools...	This action will upload the current sheet contain Datamart definitions and add to the current Program Library.
	d4e Options...	
	Manage...	
	Import Sheet	



Click OK to confirm upload to the current Program Library (Data Mart List):



Close all messages and re-start Excel. The new datamarts will be available including the menu option showing the new datamarts.



Step 4 - Run the New Reports

Go To Option WORLD_EX2 datamart Join

Icon	Action	Details
	Apps... WORLD_EX2 datamart Join... WORLD_EX2 datamart Join	This action will present the ADHOC (custom) report based on the CITY and COUNTRY table.

A parameter screen will be presented as follows:

My Data Mart - Runtime Prompts - WORLD_EX2 Data Mart Join

Customise Fields
Formatted ☒
Append File
Show Script
Run Script
Skip to Resume
Clear All
Preferences ☒
Help
Edit DM
More Label
Less Label

1. SELECT MYSQL ODBC USERID? ...

2. MYSQL LOGON USERID?

3. MYSQL LOGON PASSWORD?

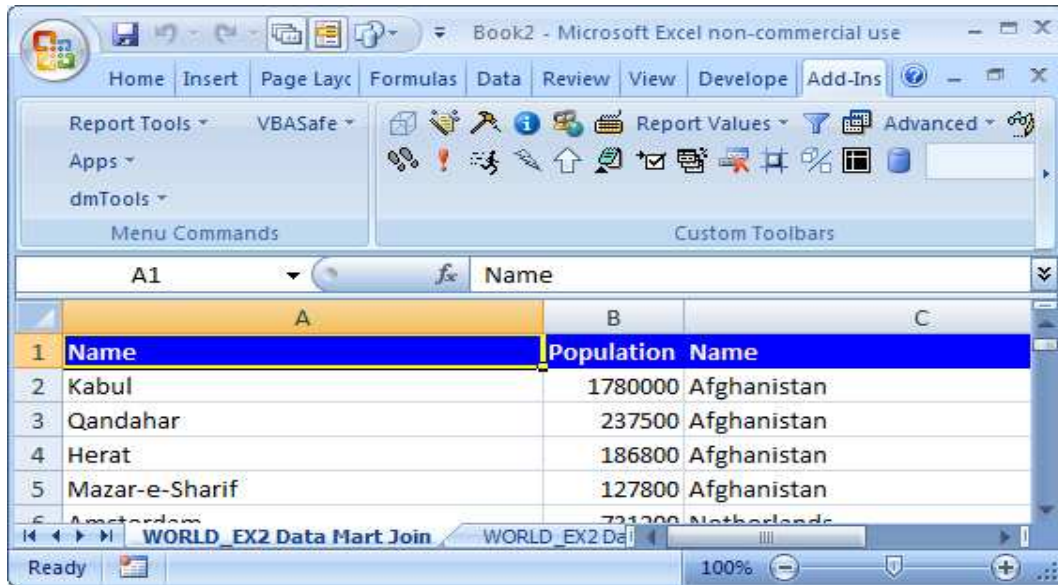
4. SELECT CITY NAME IN? ...

OK Cancel

Note that parameter prompt 4 is the Special Filter nominated during the Join Build process. It is also designed to present a list of values (LOV) when the Choices button is clicked.

As a Special Filter, the end-user can nominate a list of city names as: list separated by commas, from-to range, string pattern with % as wild char, or combinations thereof.

Click OK to get all CITY names.



The screenshot shows an Excel window titled 'Book2 - Microsoft Excel non-commercial use'. The ribbon includes Home, Insert, Page Layout, Formulas, Data, Review, View, Develop, and Add-Ins. The 'Data' tab is active, showing 'Report Tools' and 'Advanced' options. The worksheet contains a table with the following data:

	A	B	C
1	Name	Population	Name
2	Kabul	1780000	Afghanistan
3	Qandahar	237500	Afghanistan
4	Herat	186800	Afghanistan
5	Mazar-e-Sharif	127800	Afghanistan
6	Amsterdam	721200	Netherlands

END OF DOCUMENT