

Welcome to DB-Rider.

DB-Rider is a programming framework that helps create MySQL database applications.

Based on the Rebol programming language, DB-Rider provides a framework for your Rebol scripts to attach to a Query and Record Editor environment.

Your collection of Rebol scripts "ride" on top of the database, hence the name DB-Rider.

Along with a large array of supporting functions and a custom dialect, DB-Rider provides predefined program patterns that allow you to create custom SQL queries, reports, actions and output.

To get DB-Rider fully operational you will need to do the following steps.

Install the MySQL Server (or equivalent like MariaDB) onto your computer.

Download MySQL from here => <https://www.mysql.com/products/community/>

The install guide is here => <https://dev.mysql.com/doc/refman/5.7/en/installing.html>

Set and document the username and password to access the MySQL server. (can not use a blank password) You will need this information when you setup DB-Rider

Use your existing text editor (if you have one) or install Notepad++ .

Notepad ++ can be found here => <https://notepad-plus-plus.org/download/v7.4.2.html>

Determine where your text editor is located on your computer. You will need to supply this information when you setup DB-Rider.

Install the following databases (for tutorial purposes);

- 1.) `billing_start` - This is a sample database that will allow you to learn how to use DB-Rider
- 2.) `billing_complete` - This is a sample database that will show you an example of a completed DB-Rider application.

Load the 'billing_start' database using MySQL Workbench

- 1.) Start MySQL Workbench
- 2.) Select the menu item: **Server/Data Import**
 - o Import from Self-Contained File
 - o Select the file named 'billing_start.sql' found within the 'sample-data' folder where DB-Rider has been installed.

Load the 'billing_complete' database using MySQL Workbench

- 1.) Start MySQL Workbench
- 2.) Select the menu item: **Server/Data Import**
 - o Import from Self-Contained File
 - o Select the file named 'billing_complete.sql' found within the 'sample-data' folder where DB-Rider has been installed.

Install Rebol 2 onto your computer.

The install file can be found here => <http://www.rebol.com/downloads.html>

Test run rebol to ensure that it is working properly.

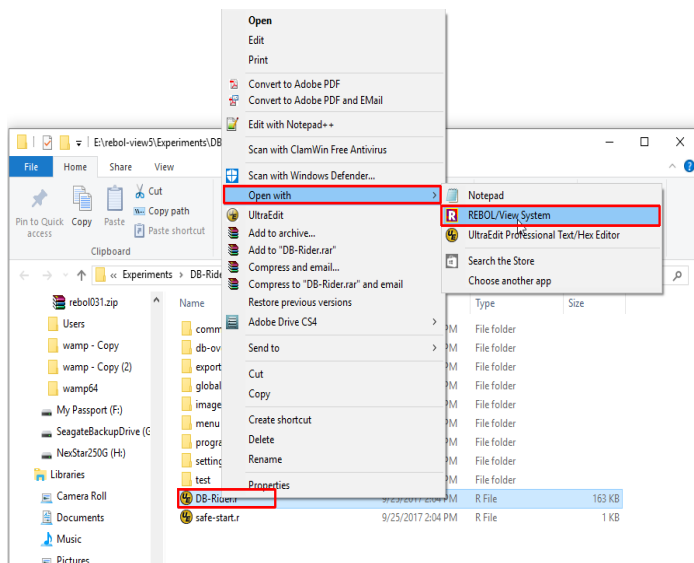
Install the DB-Rider program onto your computer by unzipping the package and copying it to any folder that you wish.

Once you have the sample databases loaded, a text editor installed and Rebol 2 running you are ready to run DB-Rider.

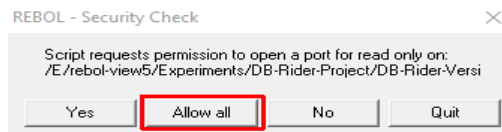
You can view videos that will help you with DB-Rider at:

<https://www.youtube.com/playlist?list=PLY20GX5h0jqEDcQNvfDcyoiHi5bTrkMO2>

If you are using Window, right clicking on the 'DB-Rider.r' file and selecting Open with/Rebol View System as show below:



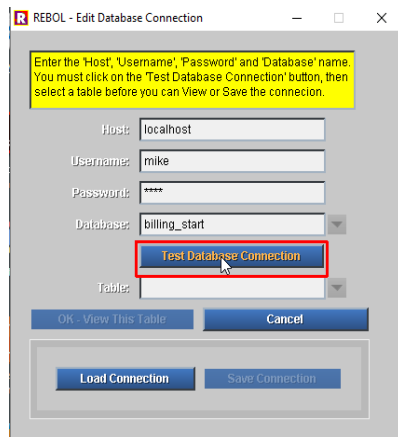
If you see the “Security Check” window click on “Allow All”



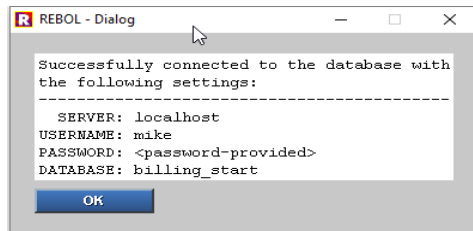
The first thing DB-Rider needs is a connection to your existing database.

Configure your Database connection

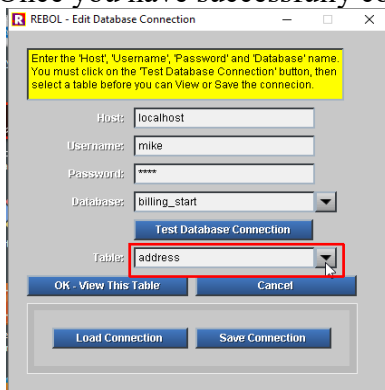
Enter your username, password and database name that you configured on the MySQL Server then click on “Test Database Connection”



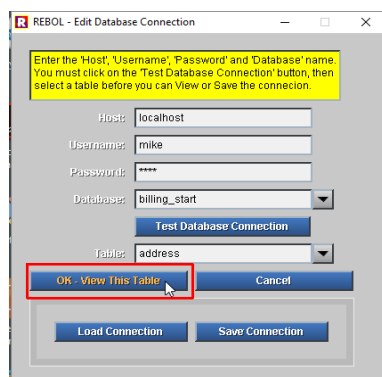
If all of the information you have entered is correct you should see a message like this:



If you receive error messages, correct them and try to “Test Database Connection” again. Once you have successfully connected to the database select a table from the drop down list.

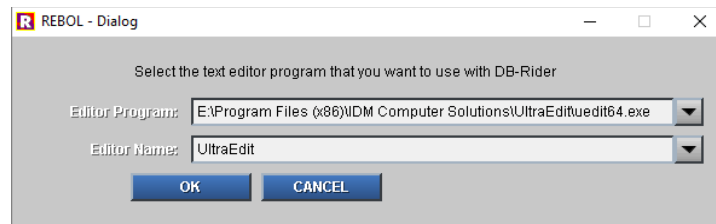


Then click on the “OK – View This Table” button.



If this is the first time you have started DB-Rider you will see the requester shown below.

Enter the full path and executable name of your chosen text editor. (This is a one time setting.) Then set the 'Editor Name' as well. If your editor isn't in the list then select 'unknown-editor'.



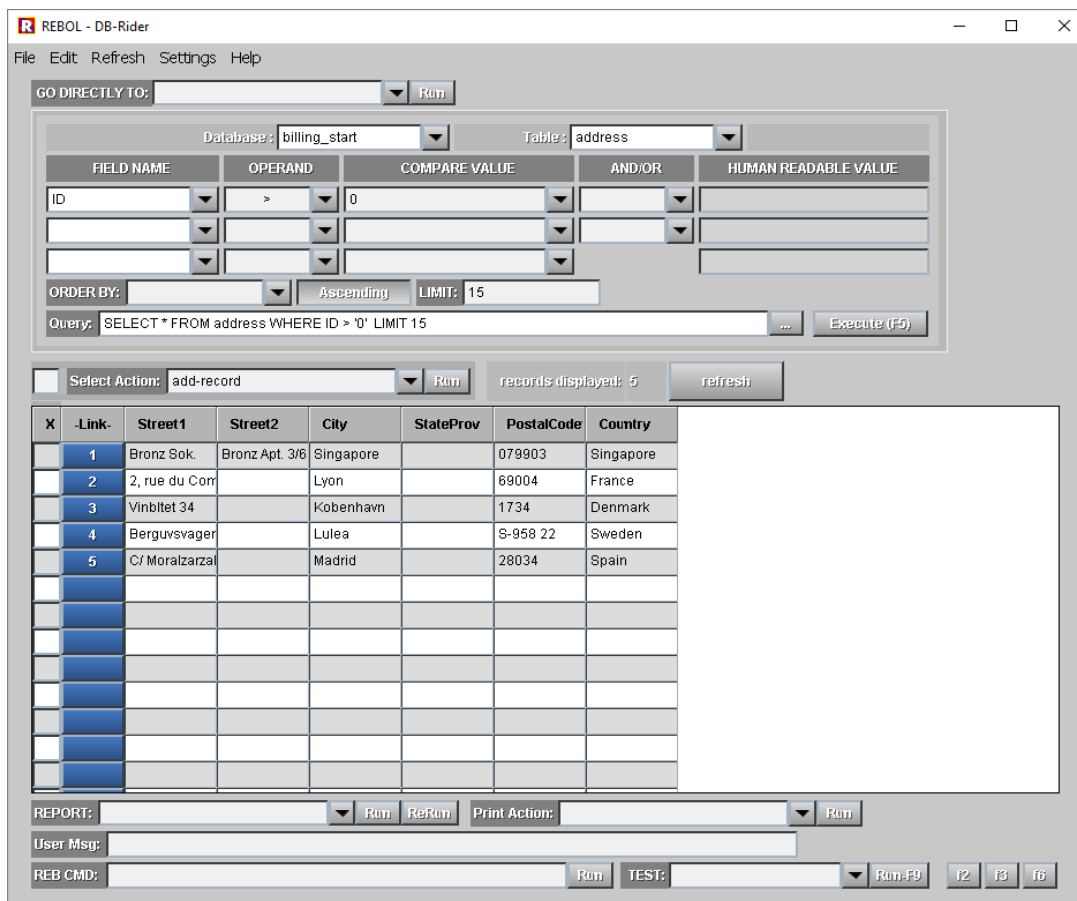
You can skip this step by clicking on "CANCEL". However you won't be able to edit any scripts within the DB-Rider application and you will be asked again to set this up the next time you start DB-Rider.

If you need to change it later, you can by selecting the menu item: **Settings/Text Editor**

You should now be looking at the "address" table that is contained within the "billing_start" database.

This is an example of what a "bare" database looks like in DB-Rider, which means no customization has been done to make this database a useful application.

You will see a sample set of data of the 'address' table that looks like this:



The next step is to create a “relationships” configuration between the various tables.

We will create a relationship between two tables just to see how it works and what it does for us.

Note: DB-Rider attempts to make all data transparent to the user. In order to do this, the terms “computer readable” and “human readable” need to be understood.

“Computer Readable” is almost always an integer value

IE: The 'MainContact' field shown below contains a computer readable value of '5'.

“Human Readable” is usually a string value, that is understandable by humans.

IE: The 'MainContact' field below contains a human readable value of 'Jonas Bergulfsen'.

The screenshot displays two database windows. The 'SOURCE TABLE' window is for the 'company' table in the 'billing' database. It shows a record with ID 1, Name 'Baane Mini Imports', and MainContact 5. The 'TARGET TABLE' window is for the 'person' table in the 'billing' database. It shows a record with ID 5, FirstName 'Jonas', and LastName 'Bergulfsen'. Red arrows and boxes highlight the relationship: an arrow points from the 'MainContact' field in the source table to the record in the target table, and another arrow points from the 'Jonas Bergulfsen' text in the target table back to the 'MainContact' field in the source table.

SOURCE TABLE

ID	1
Name	Baane Mini Imports
MainContact	5
BillAddress	12
ShipAddress	0
DefaultIter	0

TARGET TABLE

ID	5
FirstName	Jonas
LastName	Bergulfsen

DB-Rider automatically shows the human readable text from the “target table”

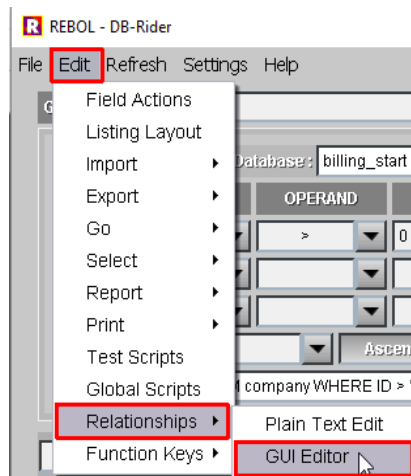
This field entry refers to this record in the TARGET TABLE

A relationship between two tables consists of a “source” table and a “target” table.

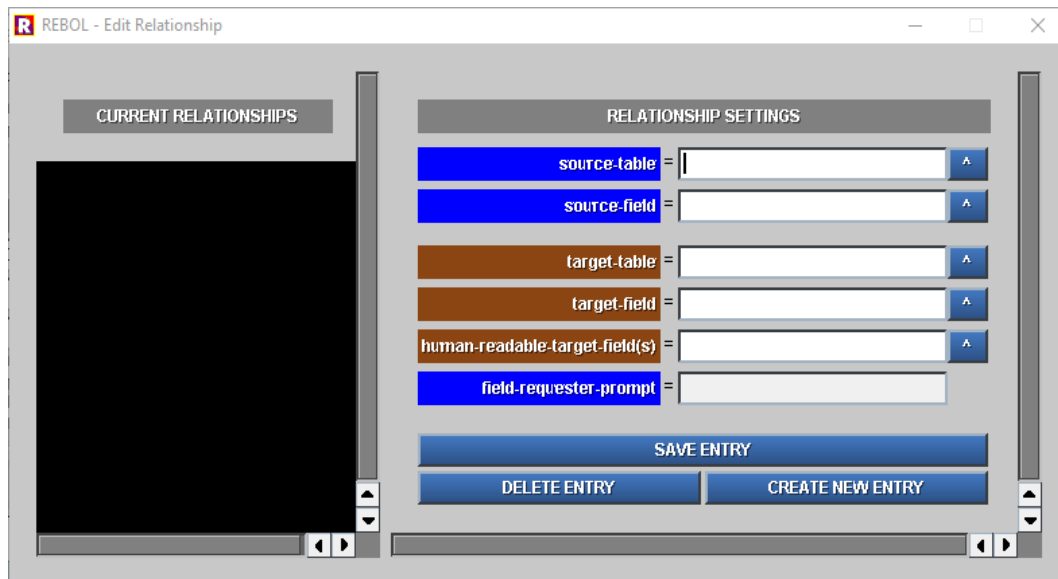
In this tutorial we will create a link between these two tables.

```
source table: 'company'  
target table: 'person'
```

To create a “relationships” file for this database select the menu item: **Edit/Relationships/GUI Editor** as show below;



You will see the “Relationship Editor” window. Currently there are no relationships defined.

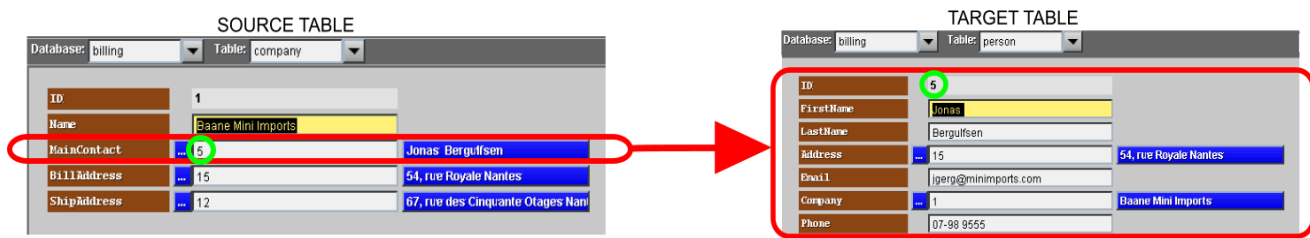


The next page explains how to fill in the form to create a relationship between

source-table: 'company'
source-field: 'MainContact'

AND

target-table: 'person'
target-field: 'ID'



Using the drop down buttons, fill in the relationships settings as shown below:

Relationship Settings

source-table	company
source-field	MainContact
target-table	person
target-field	ID
human-readable-target-field(s)	FirstName,LastName
field-requester-prompt	Select a person

"Select a person"

SOURCE TABLE

ID	1	
Name	Baane Mini Imports	
MainContact	5	Jonas Bergulfen
BillAddress	15	54, rue Royale Nantes
ShipAddress	12	67, rue des Cinquante Otages Nan

TARGET TABLE

ID	5	
FirstName	Jonas	
LastName	Bergulfen	
Address	15	54, rue Royale Nantes
Email	jgerp@minimports.com	
Company	1	Baane Mini Imports
Phone	07-98 9555	

Once you have "SAVED" the relationship setting, you will see it displayed on the left side like this:

REBOL - Edit Relationship

CURRENT RELATIONSHIPS

company / MainContact

RELATIONSHIP SETTINGS

source-table	=	
source-field	=	
target-table	=	
target-field	=	
human-readable-target-field(s)	=	
field-requester-prompt	=	

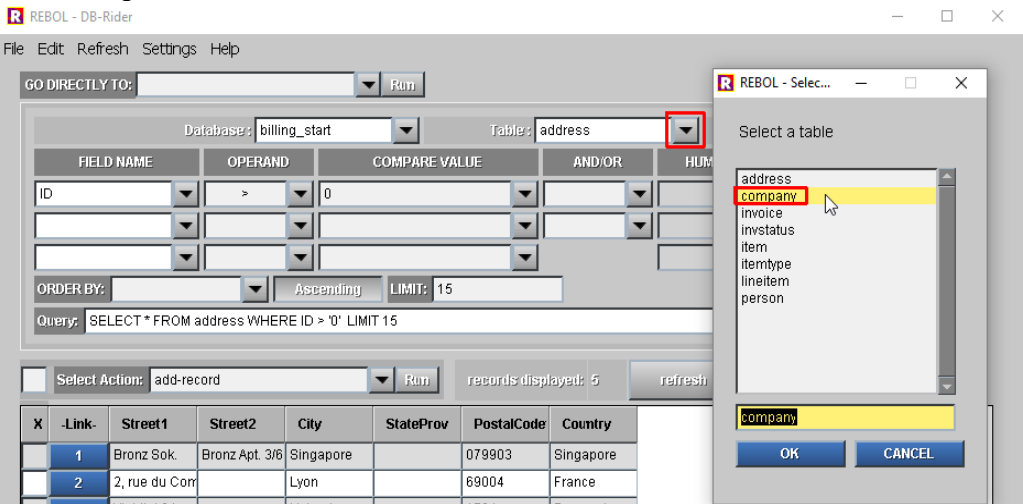
SAVE ENTRY

DELETE ENTRY **CREATE NEW ENTRY**

Close the "Relationship Editor" window.

Creating a relationship has 3 of the following important effects on the DB-Rider application:

- 1.) **Requesters are automatically built and activated for the “Edit Record Window”.**
To see this in the “Edit Record Window” first select the 'company' table by clicking on the 'Table' drop down list like this:



Then edit the first record in the 'company' table by clicking on -Link- button #1.

Select Action: add-record		Run	records displayed: 5		refresh
X	-Link-	Name	MainContact	BillAddress	ShipAddress
1		Baane Mini Imports	0	0	0
2		Mini Gifts Distributors	0	0	0
3		Havel & Zbyszek Co	0	0	0
4		Blauer See Auto, Co.	0	0	0
5		Mini Wheels Co.	0	0	0

You will see the “Edit Record Window” as shown below. Click on the “...” button beside the 'MainContact' field. (The “...” button is called the “assist-button” and can be programmed by you to do anything you want ~ we will get to that later in the tutorial)

REBOL - Edit Record

File Edit Settings

Database: billing_start Table: company

Link Depth: 0 Back Track-F12 New Record-F6 Delete Duplicate-F8 New Target Record-F5

ID	1
Name	Baane Mini Imports
MainContact	...
BillAddress	0
ShipAddress	0

1 < > refresh

User Msg: ...

SQL CMD:

REB CMD:

F1 = F2 =

A requester will display your list of 'MainContact' choices. Select the first name in the list.

REBOL - Edit Record

File Edit Settings

Database: billing_start Table: company

Link Depth: 0 Back Track-F12 New Record-F6 Delete Duplicate-F8 New Target Record-F5

ID	1
Name	Baane Mini Imports
MainContact	...
BillAddress	0
ShipAddress	0

1 < > refresh

User Msg: ...

SQL CMD:

REB CMD:

F1 = F2 =

REBOL - Select...

Select a person

- Carine Schmitt
- Janine Labrune
- Jean King
- Jonas Bergulfsen
- Peter Ferguson

Carine Schmitt

OK CANCEL

REFRESH NEW-F5

The “Edit Record Window” will then display the changes you have made to the 'company' table:

Close the “Edit Record Window” - Click on the “X” in the top right corner of the window or press the Escape key.

Your changes to the 'company' table are not yet reflected in the “Query Window”. Press the “refresh” button to see your changes.

X	-Link-	Name	MainContact	BillAddress	ShipAddress
1		Baane Mini Imports	0	0	0
2		Mini Gifts Distributors	0	0	0
3		Havel & Zbyszek Co	0	0	0
4		Blauer See Auto, Co.	0	0	0
5		Mini Wheels Co.	0	0	0

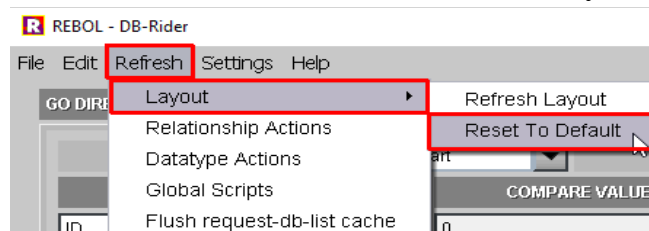
You can see your changes now, but this isn't that useful

X	-Link-	Name	MainContact	BillAddress	ShipAddress
1		Baane Mini Imports	1	0	0
2		Mini Gifts Distributors	0	0	0
3		Havel & Zbyszek Co	0	0	0
4		Blauer See Auto, Co.	0	0	0
5		Mini Wheels Co.	0	0	0

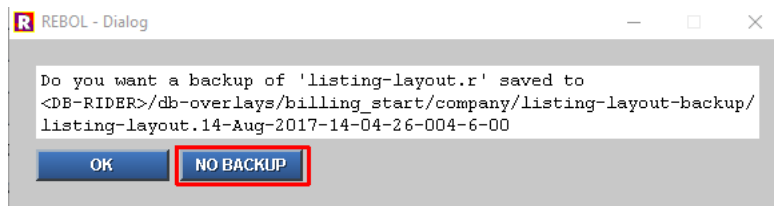
Which brings us to the second effect that the relationship settings have on a DB-Rider application.

- 2.) The listing layout will display the “human readable” version of any related fields. (if you wish)

To see this effect select the menu item: **Refresh/Layout/Reset To Default**



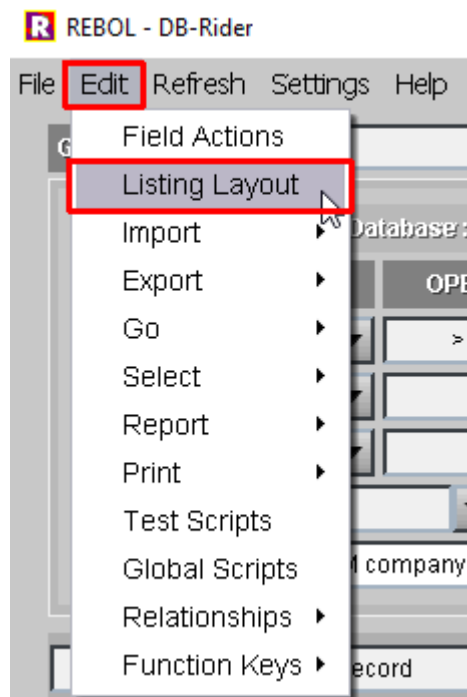
You will be asked if you want to make a backup of the 'listing-layout.r' file.
For this tutorial just select “NO BACKUP”.



You should now see the “human readable” data associated with the 'MainContact' field.

X	-Link-	Name	MainContact	BillAddress	ShipAddress
	1	Baane Mini Imports	Carine Schmitt	0	0
	2	Mini Gifts Distributors	0	0	0
	3	Havel & Zbyszek Co.	0	0	0
	4	Blauer See Auto, Co.	0	0	0
	5	Mini Wheels Co.	0	0	0

The displaying of query results listing is controlled by a file called “listing-layout.r”
You can edit this file at any time by selecting the menu item: **Edit/Listing Layout**



If you have successfully configured your external text editor then the “listing-layout.r” file will be displayed in your text editor. The change to the “listing-layout.r” file to display human readable data for the 'MainContact' field is show below. Full details on how the “listing-layout.r” file works can be found in the DB-Rider Reference Manual

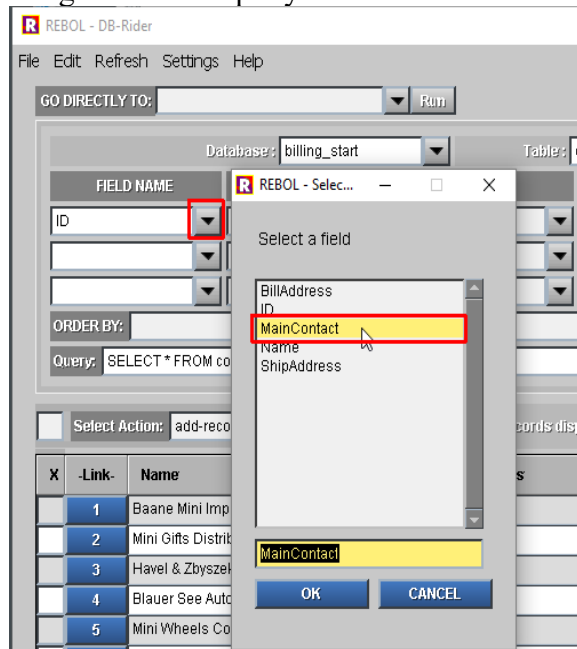
```
[heading "Name" data [Name] format [info 120 edge [size: 1x1] left]]  
[heading "MainContact" data [to-human "MainContact"] format [info 150 edge [size: 1x1] left]]  
[heading "BillAddress" data [BillAddress] format [info 150 edge [size: 1x1] left]]  
[heading "ShipAddress" data [ShipAddress] format [info 150 edge [size: 1x1] left]]
```

As you gradually build a DB-Rider relationships file the human readable values will not be displayed in the listing window. To see the human readable values you can either manually edit the “listing-layout.r” file manually (as show above) or use the menu item:
Refresh/Layout/Reset To Default

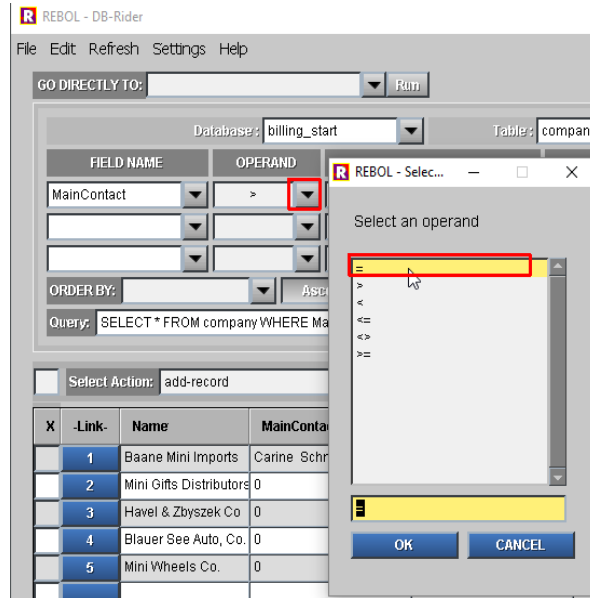
3.) “Query Window” requesters are also automatically generated when a relationship exists between tables.

An example of this can be shown by modifying the current query.

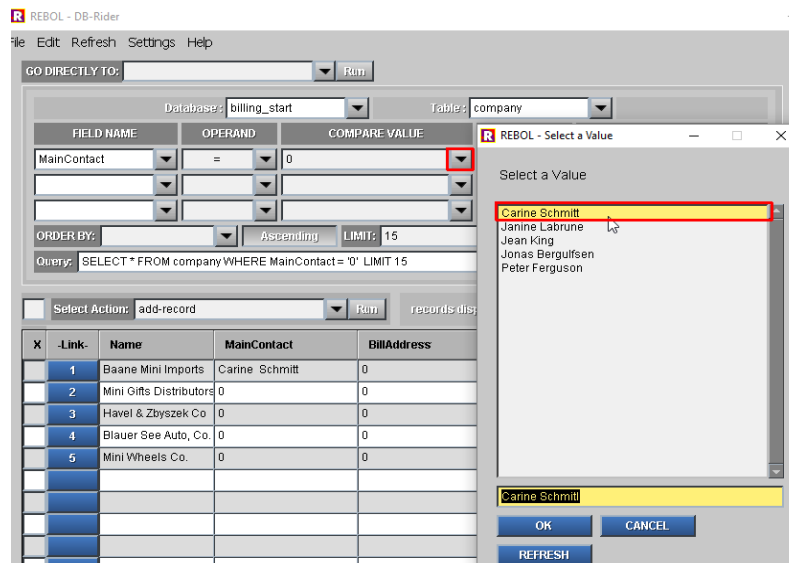
Change the curret query 'FIELD NAME' to 'MainContact' by clicking the drop down list



Change the 'OPERAND' to “=”



Then click the 'COMPARE VALUE' drop down list and select “Carine Schmitt”
Whenever there is a valid relationship between tables a customized requester will be displayed to allow you to make a correct selection.



The resulting query is now created that is both computer and human readable.

Database: billing_start Table: company

FIELD NAME	OPERAND	COMPARE VALUE	AND/OR	HUMAN READABLE VALUE
MainContact	=	1		Carine Schmitt

ORDER BY: Ascending LIMIT: 15

Query: SELECT * FROM company WHERE MainContact = '1' LIMIT 15

Execute (F5)

Click the “Execute (F5)” button to see the results of the above query.

You can play with the 'billing_start' database to experiment and learn how DB-Rider works.

If you open the 'billing_complete' database you can see what a completed DB-Rider application looks like.

To open the 'billing_complete' database click on the drop down list beside the “Database” field.

REBOL - DB-Rider

File Edit Refresh Settings Help

GO DIRECTLY TO: Run

Database: billing_start

FIELD NAME	OPERAND	COMPARE VALUE
ID	>	0

ORDER BY: Ascending LIMIT: 15

Query: SELECT * FROM person WHERE ID > '0' LIMIT 15

Select Action: add-record

Select a database

- billing_complete
- billing_start
- information_schema
- mysql
- performance_schema
- sys

OK CANCEL

Then select the 'company' Table. In a similar fashion.

REBOL - DB-Rider

File Edit Refresh Settings Help

GO DIRECTLY TO: none Run

Database: billing_complete Table: address

FIELD NAME	OPERAND	COMPARE VALUE	AND/OR	HUMAN READABLE VALUE
ID	>	0		

ORDER BY: Ascending LIMIT: 15

Query: SELECT * FROM address WHERE ID > '0' LIMIT 15

Select Action: duplicate-record-exact-copy Run

records displayed: 5 refresh

Select a table

- address
- company
- invoice
- invstatus
- item
- itemtype
- lineitem
- person

OK CANCEL

Select the first record in the query listing by clicking on button #1

X	-Link-	Name	MainContact	BillAddress	ShipAddress
	1	Baane Mini Imports	Carine Schmitt	C/ Moralarzal, 86 Madrid	Vinbltet 34 Kobenhav
	2	Mini Gifts Distributors Ltd.	Janine Labrune	2, rue du Commerce Lyon	0
	3	Havel & Zbyszek Co	Jean King	Bronz Sok. Singapore	0
	4	Blauer See Auto, Co.	Jonas Bergulfsen	C/ Moralarzal, 86 Madrid	0
	5	Mini Wheels Co.	Peter Ferguson	Vinbltet 34 Kobenhavn	0

Let's add a new record by either pressing the “New Record-F6” button or just pressing the F6 key.

REBOL - Edit Record

File Edit Settings

Database: billing_complete Table: company

Link Depth: 0 Back Track-F12 New Record-F6 Delete Duplicate-F8 New Target Record-F5

ID: 1

Name: Baane Mini Imports

MainContact: ... 1 Carine Schmitt

BillAddress: ... 5 C/ Moralarzal, 86 Madrid

ShipAddress: ... 3 Vinbltet 34 Kobenhavn

Enter a new company name IE. “Acme Construction”
Then press the Enter key.

REBOL - Edit Record

File Edit Settings

Database: billing_complete Table: company

Link Depth: 0 Back Track-F12 New Record-F6 Delete Duplicate-F8 New Target Record-F5

ID: 6

Name: Acme Construction

MainContact: ...

BillAddress: ...

ShipAddress: ...

You should now be at the 'MainContact' field.
Click on the “...” button next to the 'MainContact' field or press the F4 key
(The F4 key is a shortcut for all “...” type buttons in DB-Rider)

REBOL - Edit Record

File Edit Settings

Database: billing_complete Table: company

Link Depth: 0 Back Track-F12 New Record-F6 Delete Duplicate-F8 New Target Record-F5

ID: 6

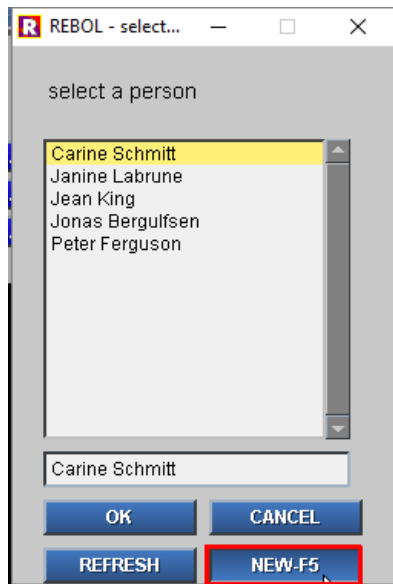
Name: Acme Construction

MainContact: ...

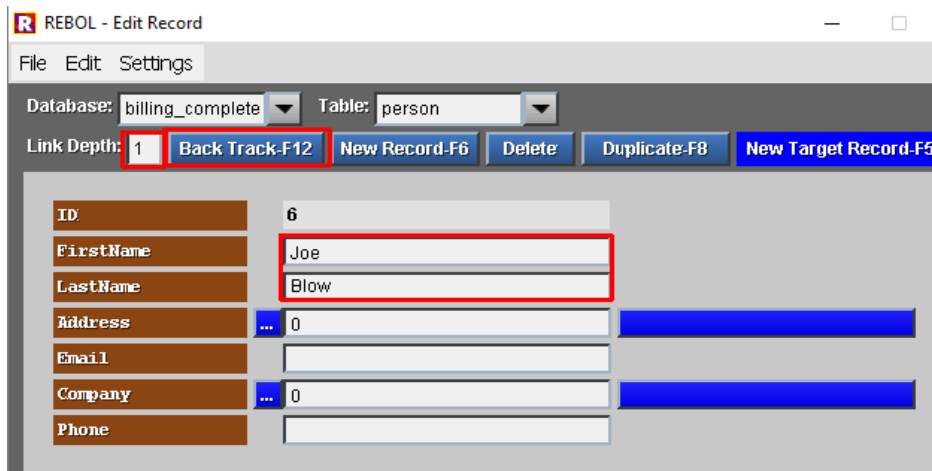
BillAddress: ...

ShipAddress: ...

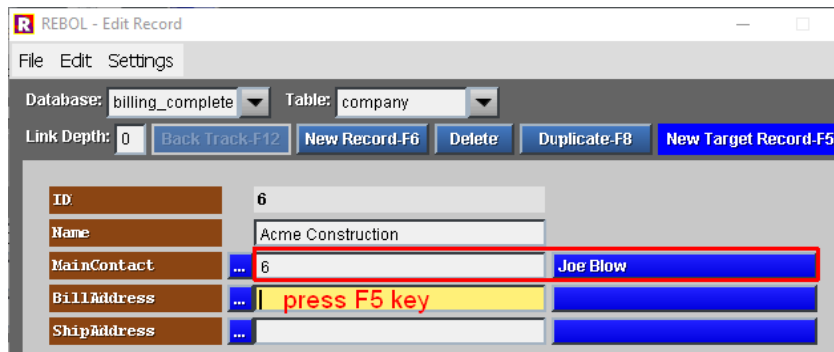
The “select a person” requester is displayed but seeing as this is a brand new entry in the database the person affiliated with “Acme Construction” is not present. So to create a new person click on the “NEW-F5” button or press the F5 key.



You will be presented with a blank 'person' record. Enter in the FirstName “Joe” and LastName “Blow” This will be enough information for now. Notice that the “Link Depth” field is displaying '1' and the “Back Track” button is now no longer ghosted out. This means you are one link deep and that you can return back to where you came from by either clicking the “Back Track-F12” button or by pressing the F12 key. Do that now.



You will notice that you have been brought back to the 'company' table with your new entry for 'MainContact' entered in for you. Press the tab or enter key to move the cursor to the 'BillAddress' field. This again is going to be a brand new entry for the 'BillAddress' so to immediately create a “New Target Record” and begin entering data for the new address press the F5 key.



REBOL - Edit Record

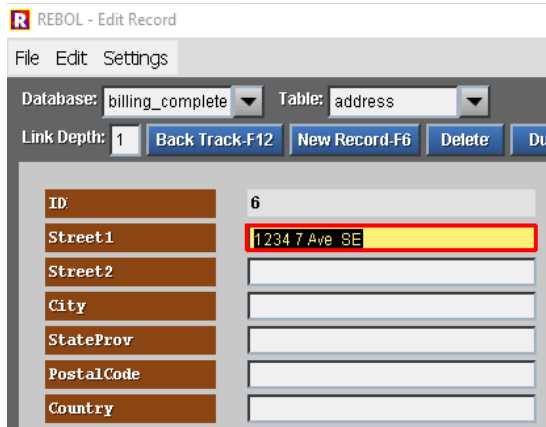
File Edit Settings

Database: billing_complete Table: company

Link Depth: 0 Back Track-F12 New Record-F6 Delete Duplicate-F8 New Target Record-F5

ID	6
Name	Acme Construction
MainContact	6 Joe Blow
BillAddress	press F5 key
ShipAddress	

You will be brought immediately into a blank 'address' record. Enter some data into the 'Street1' field of the 'address' record.



REBOL - Edit Record

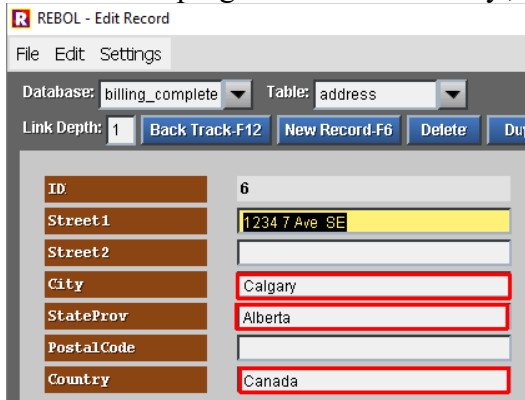
File Edit Settings

Database: billing_complete Table: address

Link Depth: 1 Back Track-F12 New Record-F6 Delete Dup

ID	6
Street1	1234 7 Ave SE
Street2	
City	Calgary
StateProv	Alberta
PostalCode	
Country	Canada

Just keep pressing the enter key (leaving the other fields blank) and you will see that there have been some defaults programmed for the 'City', 'StateProv' and 'Country' fields.



REBOL - Edit Record

File Edit Settings

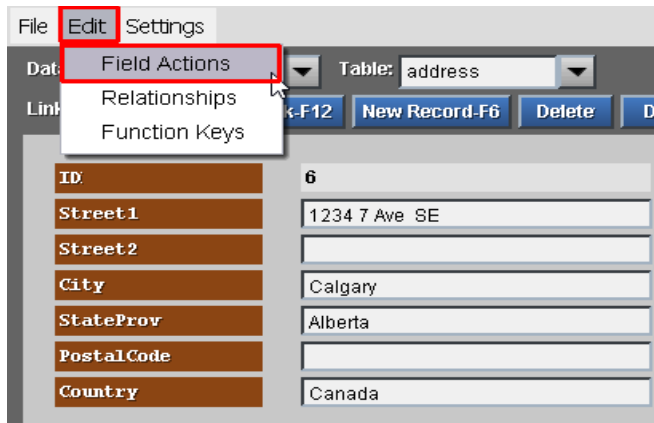
Database: billing_complete Table: address

Link Depth: 1 Back Track-F12 New Record-F6 Delete Dup

ID	6
Street1	1234 7 Ave SE
Street2	
City	Calgary
StateProv	Alberta
PostalCode	
Country	Canada

The auto entry of data is done by the “field-actions.r” file.

You can edit the “field-actions.r” script by selecting the menu item: **Edit/Field Actions**



Here is a sample and an explanation of the code block found in the “field-actions.r” file that is attached to the 'city' field:

```
Code block for "city" field [
  "City" [
    assist-button [
    ]
    on-return [
      if ((get-field "city") = "") [
        set-field "city" "Calgary"
        set-focus next-field
      ]
    ]
  ]
]
```

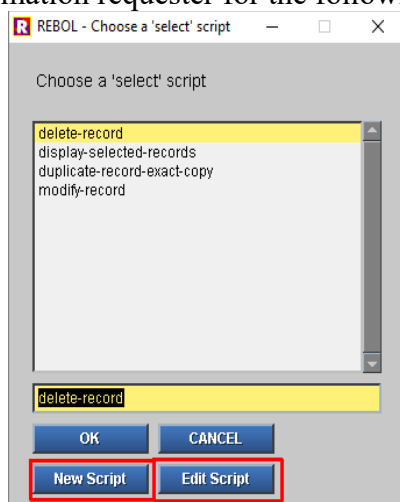
Code block to run when 'on-return' (or enter or tab) is pressed when at the "City" field

A full description of the “field-actions.r” file is outlined in the DB-Rider Reference Manual. Press the F12 key to return back to the 'company' table.

DB-Rider has a variety of scripts that you can modify to meet your needs.

Every customizable DB-Rider script can be seen by selecting the menu item: **File/New** or **File/Open**

Creating or editing most DB-Rider scripts is also available (where appropriate) at the bottom of the information requester for the following action areas: Go, Select, Report, Print, Test, Import and Export



Check out the various existing scripts in the 'billing_complete' database. Those scripts are good examples of how to do things.

I will be posting video tutorials to YouTube as well at this location

<https://www.youtube.com/playlist?list=PLY20GX5h0jqEDcQNvfDcyoiHi5bTrkMO2>

~ DB-Rider *Alpha program release* Version 0.7.0

More documentation and videos to come.