.com Solutions Inc.



Code Conversion Workbench Manual

Code Conversion Workbench Manual

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Overview

Overview

The Code Conversion Workbench feature within the <u>Al Accelerated version of FmPro Migrator</u> <u>Platinum Edition</u> is used to convert code from FileMaker Pro, FoxPro 2.6, Microsoft Access and Visual FoxPro. The Code Conversion Workbench converts code into over 50 different programming languages by using multiple machine learning models. As the code is converted, the files are written into the output directory, and can also be copied via the clipboard and pasted directly into FileMaker Pro or other development environments.

Revision 2 FmPro Migrator 10.01 8/31/2023

[Revision Notes: Added FoxPro 2.6 import instructions.]

GUI

The Code Conversion Workbench is included with the Al Accelerated version of FmPro Migrator Platinum Edition.

The Code Conversion Workbench consists of a single application window used to manage the conversion of hundreds or thousands of scripts into over 50 programming languages. As scripts are completed, they can be checked off in the grid of script on the left side of the window.

The source of scrips used by the Code Conversion Workbench is the MigrationProcess.db3 SQLite database file which is created and used by FmPro Migrator. Before performing code conversion, the scripts need to already be imported into the Scripts tab of the Migration Process window of FmPro Migrator.

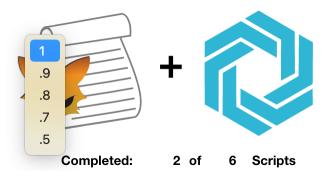
Each source database is used to prefix the name of the code conversion, so if Visual FoxPro is the source database type, the title across the window will be: VFP Code Conversion Workbench.

Most screenshots in this manual are from macOS, but the tool works exactly the same way on Windows.

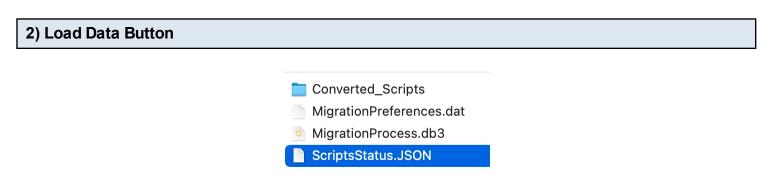
Code Con	versio	n Work	bench Window		
	+		VFP Co	ode Conversion Workbench	oench
Completed Status Not Started Not Started Completed Not Started Not Started	2 of 1 2 3 4 5 6 6 6	6 Script Size 2441 4760 6788 14406 20234 1207	s Coript Name pgraph.prg cgraph.prg cgraph.prg didproc.prg datepick.prg frmanimation	Source Script (Editable): 14 Size: 2,059 PROCEDUPE endok Click	Source: Visual FoxPro 4 Output Language: C# 5 Procedure/Function: cmdok.Click 685-749 6 1 1 1 Convert Vendor: OpenAl 2 3
				Converted Script:	API Key: dcs 9 Model: gpt-3.5-turbo 10 P Ref Tokens Used Today: 12 71 Output Filename: datepick_cmdok_Click.cs 13 Need Help?

Most features in this window include tooltips, described in this manual.

1) Window Scale Factor - Pop-up Menu



The Code Conversion Workbench window will auto-scale in size based upon the size of your display. You can change the window scaling by selecting a different value from this popup menu. The Window Scale Factor Menu tooltip will be displayed when you move the cursor over this



If there are scripts located within the FmPro Migrator MigrationProcess.db3 SQLite project file, the grid of scripts should be displayed automatically as soon as the window opens. If there weren't any scripts in the MigrationProcess.db3 file when the Code Conversion Workbench window was opened, the list of scripts would be empty. Once you import scripts using FmPro Migrator, click the Load Data button to populate this grid with the list of scripts.

The scripts displayed in this grid are read from the MigrationProcess.db3 file and the Status checkmarks/Completed/Not Started text are read from the ScriptsStatus.JSON file shown above.

Note: If the Code Conversion Workbench is running in Demo mode, only a list of demo scripts will be displayed, not the actual scripts within the MigrationProcess.db3 file.

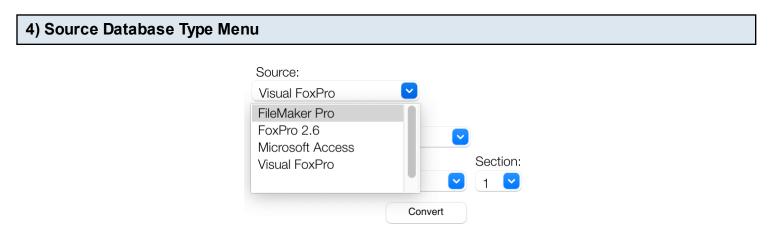
Load Data Completed: 2 of 6 Scripts Status ID Size **Script Name** Not Started 2441 1 pgraph.prg Not Started 2 4760 cgraph.prg Completed 3 6788 main.prg 4 Not Started 14406 fdproc.prg Not Started 5 20234 datepick.prg 6 frmanimation Completed 1207

The scripts grid provides a way for the developer to select specific scripts, convert them and check them off as being completed by clicking the checkmark column. The Completed ? of ? labels above the grid give a running count of the conversion status of the scripts.

Each script has an ID for reference purposes and its size in bytes and name are listed in the grid. Long script names are viewable with the scrollbar at the bottom of the grid.

3) Scripts Grid

Clicking any script causes it to be read from the database and displayed in the Source Script field. Clicking the script a 2nd time (to set its check/unchecked status) does not reload the script - in order to keep the contents of the Converted Script field visible.



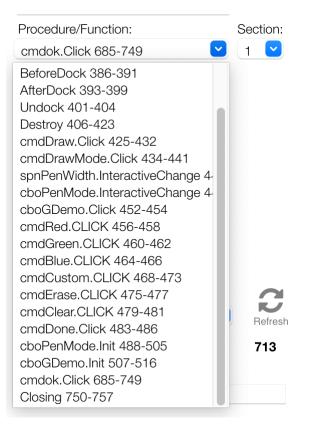
Source database types include: FileMaker Pro, FoxPro 2.6, Microsoft Access and Visual FoxPro.

Selecting the Source Database changes the title across the top of the window and re-writes the contents of the Command window.

tput Language Menu		
tput Language Menu	Source: Visual FoxPro Output Language: C# ABAP Ada Assembly Awk Bash C	Section:
	C C# C++ CFML Classic Visual Basic COBOL D Dart Delphi/Object Pascal Emacs Lisp F# FileMaker Pro Fortran Go	Refresh
	Groovy	713

Selecting one of the over 50 output languages from the TIOBE index will rewrite the Command prompt for the selected language. Some of the languages include the specification of a framework and database name based upon the database selected on the main screen of FmPro Migrator as the output database. The text in the Command field can be manually updated to include any additional details required for the conversion.

5) Out



If the main script is too large for processing by a specific machine learning model, red text "Script Too Large" will be displayed above the Source script field. If this occurs, then it is possible to break of some scripts (like Visual FoxPro) automatically into individual procedures/functions individually.

Visual FoxPro scripts often contain multiple procedures/functions. It is generally better to send smaller pieces of text to the AI models for processing, so this menu enables selecting individual procedures/functions for sending to the AI model for processing.

********** cgraph.prg	Source:	
	Source.	
********* C`\DS\\VFP_TESTS\SOLUTION\forms\graphics\cgraph.prg * Plot graph (Polar). * Parameter:	Visual FoxPro	
* 1) cEquation (For radius) in terms of X. TYPE = Character. * 2) nFrom, Where to stop counting for X. TYPE = Numeric.	Output Language:	
* 3) nTo. Where to start counting for X. TYPE = Numeric. * 4) nStepInc. Step increment. TYPE = Numeric.	C#	
 * 5) nEquColor. TYPE = Numeric. * 6) IConnect. If the previous point is connected to the cuurnt point with a line. TYPE = Logical. 	Procedure/Function:	Section:
* 7) nXCenter. Point on form where x = 0. TYPE = Numeric.	Closing 1-132	<u> </u>
	Convert	1 2
Command (Editable):		3
Translate this Visual FoxPro code into C# code	Vendor:	4
	OpenAl 🕑	5

Some individual procedure/functions could still be too large, including the example shown here. If the "Script Too Large" script is displayed for an individual procedure/function then the Section sub-menu will also be displayed. This enables the large script to be broken up into 5 more sections (with opening/closing procedure/function text added to each section).

By the way, just because the "Script Too Large" text is displayed doesn't always mean that a script won't be processed by the AI model. You can always try sending a large script for processing, and then see if you get an error from the model.

8) Vendor Menu					
	Vendor:				
	OpenAl				
	AWS				
	Azure				
	Google				

There are 4 AI vendors listed in the Vendor model at this time. OpenAI is the only one supported at this time, as the others are intended for future enhancements.

OpenAl

API Key:	dcsi	
	dcsi	
Model:	User	
MOUEI.		

By default, the Code Conversion Workbench will use the API key created by .com Solutions Inc., so "dcsi" is the default option. If you run out of AI tokens, you can generate and pay for your own API key at OpenAI.

User API Key Field			
	API Key: User	URL	

To enter your own API key, select the User menu item, a new API Key field will be shown. Clicking the URL button opens a web browser to the OpenAI website where you can create an account and generate your own API key. This key gets saved with the app preferences so you only have to enter it once.

10) Al Model Name			
	Model: gpt-3.5-turbd gpt-3.5-turbo-0301 gpt-3.5-turbo-0613 gpt-3.5-turbo-0613 gpt-3.5-turbo-16k gpt-3.5-turbo-16k-0613 gpt-4 gpt-4-0314 gpt-4-0613 text-davinci-001 text-davinci-002 text-davinci-003	2,490	

gpt-3.5-turbo will be selected as the default model. gpt-4 is also available, and generally does a significantly better job when performing conversions. But sometimes one model or the other gets overloaded so you might want to switch to another one.

Model Token Size Tooltip			
	Model:	C	

4097

Refresh

Hovering the cursor over the model menu, displays the number of tokens accepted by the selected AI model.

gpt-3.5-turbo

11) Model List Refresh Button



The list of available AI models is built into the app during development. You can refresh the list of models by clicking the Refresh button. The list of models displayed in the Model menu represents the models which are officially supported by the Code Conversion Workbench. At this time, there are 11 models in the list. Holding the Shift key when clicking the Refresh button displays all of the models available from the selected vendor. Selecting one of the unsupported models will generally result in an error message.

Updating the list of models with the refresh button doesn't permanently save these models to the Model menu when the app is closed.

12) Tokens Used Today Label & Usage Tooltip

Tokens Used Today:	2,490
	Latest Prompt: 1691 Latest Completion: 799

The number to the right of the Tokens Used Today text label shows the number of tokens used over the last 24 hours. Hovering the cursor over this number will display the number of tokens used during the most recent script conversion. In this example, 1691 tokens were used for the prompt and 799 tokens were used for the completed script which was returned by the model.

Tokens Used Today:	
500.000 Tokens Available per Dav	

2,490

Hovering the cursor over the Tokens Used Today label will display the number of tokens which can be used per day for the currently selected AI model. At the present time, 500,000 tokens per day are provided for gpt3.5-turbo and the rest of the models except for gpt4. Since it currently costs 20 times as much to use the gpt4 model, the number of tokens available per day is reduced to 25,000 when gpt4 is being used. These calculations will change over time as costs change.

13) Output	Filename	Field
------------	----------	-------

Output Filename: cgraph_Closing.cs

The name of the output script is created and saved automatically into the Converted_Scripts folder, but it can be changed manually before pressing the Convert button. In this example the filename consists of the name of the script followed by the name of the function and ending with the C# file extension.

Output Filename Tooltip					
	Output Filename:				

cgraph_Closing.cs

cgraph_Closing_2023-08-24_15_7_46.cs

The tooltip shows the actual filename written to disk. Duplicated scripts receive a timestamp in order to preserve the original script, as you can see with this example.

Source Script (Editable):	Script Too Large	Size:	4,759
**************************************	of X. TYPE = Character. for X. TYPE = Numeric. r X. TYPE = Numeric. PE = Numeric. is connected to the cuurnt p		e.

Each script is read from the MigrationProcess.db3 SQLite project file when it is clicked in the scripts list grid. The script is written into the Source Script field, which can be manually edited if needed.

The size of the script in characters is displayed above the top right of the field next to the Size label. If the size of the script is estimated to be too large for the number of tokens available for the selected model, the "Script Too Large" text will be displayed above the script.

15) Command Field

Command (Editable):	
Translate this Visual FoxPro code into C# code	

This field provides the prompt which will be sent to the AI model. The default command for this field is created automatically when selecting the Source database type or Output Language. It is also editable with additional descriptive commands such as the programming language framework or database type.

16) Convert Button	

Convert

The Convert button sends the Source script, Command and system message/properties to the Al model for processing. The results are written into the Converted Script field.

Converted Script:

Here is the translated code in C#:	
```csharp using System; using System.Drawing; using System.Windows.Forms;	
public class CGraph	
public static void PlotGraph(string cEquation, double nFrom, double nTo, double nStepInc, int nEquColor, bool IConnect, int nXCenter, int nYCenter, bool IAddCoords, Form frmFormName, double nEquScale)	
if (string.IsNullOrEmpty(cEquation) II frmFormName == null)	
MessageBox.Show("This program requires multiple parameters."); return;	
$\inf_{f} (nEquScale == 0)$	
<pre>     nEquScale = 1; }</pre>	

After clicking the Convert button, the generated script is put into the Converted Script field, and also written into the Converted_Scripts folder within the project directory.



Clicking the clipboard icon copies the contents of the Converted Script field onto the clipboard, ready for pasting into your IDE of choice.

When FileMaker Pro is selected as the Output Language the converted script text is converted into FileMaker script XML code and placed onto the clipboard in a format which can be directly pasted into the FileMaker Pro Script Workspace window.

## **Detailed Code Conversion Info**

Code Conversion Workbench Manual - 18

This chapter shows how to use the VFP Code Conversion Workbench. Before performing the code conversion with the VFP Code Conversion Workbench, you should have already imported the Visual FoxPro project into FmPro Migrator, including tables, relationships, value lists, forms/reports and scripts.

Visual FoxPro Conversion Button - GUI Tab



Click the <u>Visual FoxPro Conversion</u> button on the GUI tab of the Migration Process window of FmPro Migrator.

•••	Visual FoxF	Pro Conversi	on		
Instructions:		-	macOS.app	IOS.app	WEB-app
Import Visual FoxPro Files: Step 1) Select Visual FoxPro as the source			Linux.app	Android.apk	Windows.EXE
database on the main FmPro Migrator	Form/Report Qty:				Refresh
window.	VFP Directory:	/Users/dsimps	on/FmPro		Browse 3
Step 2) Drag & Drop the Visual FoxPro directory onto the Drag & Drop icon.	Processing Type:	Licensed	•	•	
Step 3) Select the VFP Migration Service button on the GUI tab.					
Step 4) Verify that the VFP directory field contains the pathname to the folder containing the Visual FoxPro files.	5	Import	4		

Prior to reaching this step, you should have already selected the (1) Licensed item from the Processing Type menu, (2) copied your license key from your purchase email, (3) selected the VFPExport.DBF project folder and (4) clicked the Import button to import the VFP project into FmPro Migrator. You may have already started converting the VFP project into another development environment which would mean that you are ready (5) to click the Code Conversion Workbench button.

				Code Conversion Workbench	
	+		VFP (	Code Conversion Work	bench
Completed	l: 2 of	f 6 Scrip	Load Data	Source Script (Editable): Script Too Large Size: 4,759	
Status		1 Size	Script Name	C:DSWFP_TESTS\SOLUTION\forms\graphics\cgraph.prg Plot graph (Polar).	Source:
Not Started	1	2441	pgraph.prg	<ul> <li>Parameter:</li> <li>1) cEquation (For radius) in terms of X TYPE = Character</li> </ul>	Output Language:
Not Started	2	4760	cgraph.prg	<ul> <li>2) FiFrom. Where to stop counting for X. TYPE = Numeric.</li> <li>3) FiTo. Where to start counting for X. TYPE = Numeric.</li> <li>4) Risplnc. Step increment. TYPE = Numeric.</li> <li>5) FiEquicOto: TYPE = Numeric.</li> </ul>	C# 3
Completed	3	6788	main.prg	<ul> <li>6) IConnect. If the previous point is connected to the cuurnt point with a line. TYPE = Logical.</li> <li>* 1) πXCenter. Point on form where x = 0. TYPE = Numeric.</li> </ul>	Procedure/Function: Section
Not Started	4	14406	fdproc.prg	7) TACENCE. POINT OF TOTH WHERE X = 0. TTPE = Numeric.	Closing 1-132
Not Started	5	20234	datepick.prg	Command (Editable):	Convert
Completed	6	1207	frmanimation	Translate this Visual FoxPro code into C# code	Vendor: OpenAl
					API Key: dcsi 💙
				Converted Script: Here is the translated code in C#:	
				```csharp using System;	Model:
				using Sýstem.Drawing; using System.Windows.Forms;	gpt-3.5-turbo
				public class CGraph { public static void PlotGraph(string cEquation, double nFrom, double nTo, double	Tokens Used Today: 5,07
				nStephc, int Equicolor, bool Connect, int nXCenter, int nYCenter, bool IAddCoords, Form frmFormName, double nEquScale)	Output Filename: cgraph_Closing.cs
				{ if (string.IsNullOrEmpty(cEquation) II frmFormName == null) {	ograph_oloaing.ca
				MessageBox.Show("This program requires multiple parameters."); return;	
				} if (nEquScale == 0)	

By default, the VFP Code Conversion Workbench window opens with the (1) scripts listed in the grid, (2) Visual FoxPro selected as the Source Database Type and (3) C# selected as the destination language.

Depending upon the destination database selected on the main FmPro Migrator window, you could also see FileMaker Pro or Microsoft Access VBA selected as the Output Language.

Just because the options are selected a certain way when the window opens, doesn't mean you can't change them.

You can easily change the default settings on this window for Output Language, Vendor, API Key Type, or AI Model - and the changes will be saved into the project or application preferences for FmPro Migrator.

Converting FoxPro 2.6 to Visual FoxPro

.

				Code Conversion Workbench	
FoxPro 2.6	+		FoxPro	o 2.6 Code Conversior	n Workbench
Completed	l: 2	of 6 Scri	Load Data	Source Script (Editable): Size: 643	
Status	ID	Size	Script Name	set talk off set stat off	Source:
Completed	1	2441	pgraph.prg	set scor off set cent on set date brit	
Completed	2	4760	cgraph.prg	do whil .t. clea @5 20 to 19 45 doub	Output Language: Visual FoxPro
Completed	3	6788	main.prg	@625 5ay "MAIN MENU" @7,21 to 7,44 doub k=0	
Not Started	4	14406	fdproc.prg	@ 9.25 prompt "DATA ENTRY"	Convert
Not Started	5	20234	datepick.prg	Command (Editable):	
Not Started	6	1207	frmanimation	Translate this FoxPro 2.6 code into Visual FoxPro PRG code to build an .SCX form to represent the user interface from the FoxPro SAY commands.	Vendor: OpenAl
				Converted Script:	API Key: dcsi
				PRG SET TALK OFF	Model:
				SET STAT OFF SET SCORE OFF SET CENT ON	text-davinci-003
				SET DATE BRIT CREATE FORM frmMainMenu	Tokens Used Today: 1,502
				WITH frmMainMenu ADD OBJECT IblMainMenu TO 5,20 WIDTH 19 HEIGHT 25 ;	Output Filename:
				VALUE "MAIN MENU" ADD OBJECT IneMainMenu TO 7,21 WIDTH 23 HEIGHT 1 ADD OBJECT andDataEntry TO 9,25 WIDTH 15 HEIGHT 1; VALUE "DATA ENTRY" ADD OBJECT andReportPinting TO 11,25 WIDTH 15 HEIGHT 1; VALUE "REPORT PNINTING" ADD OBJECT andProcess TO 13,25 WIDTH 15 HEIGHT 1; VALUE "PROCESS TO 15,25 WIDTH 15 HEIGHT 1; VAD OBJECT andExit TO 15,25 WIDTH 15 HEIGHT 1; VALUE "OUT TO SYSTEM" ENDWITH	fp26_mainmenu_proc1.prg

Selecting FoxPro 2.6 as the Source Database type enables the conversion of FoxPro 2.6 code into Visual FoxPro code, including the creation of forms from the FoxPro 2.6 command line code. Performing this conversion makes use of the text-davinci-003 model.

You will also need to break up the size of the script text manually, if there aren't any procedures/functions.

In order to prepare the FoxPro 2.6 project for import into FmPro Migrator, perform the following steps:

- 1) Install Visual FoxPro 9.
- 2) Make a copy of the FoxPro 2.6 project.

3) Open and convert the copied project in Visual FoxPro 9. This will upgrade all of the files including the DBF files. This is why you want to work with a copy of the project - because the DBF files won't be readable in FoxPro after conversion. And you might need to continue developing the existing FoxPro app while performing your conversion.

4) Once the FoxPro 2.6 project has been converted into Visual FoxPro 9, create a DBC and add all of the DBF files to the DBC.

5) Manually add 1 empty form to the Visual FoxPro 9 project.

Now you are ready to follow the existing PDF manual showing how to import the project into FmPro Migrator for conversion.

VFP Code Conversion Workbench Demo



VFP Code Conversion Workbench Demo

If you forgot to enter your license key or didn't have a license for the Al Accelerated version of FmPro Migrator, then the VFP Code Conversion Workbench will open in Demo mode. Apre-converted set of sample scripts will be displayed in the grid instead of the scripts from your own Visual FoxPro project.

Clicking the Convert button will place the pre-converted script into the Converted Script field.

Using the Microsoft Access Code Conversion Workbench - Access to FmPro Conversions

This chapter shows how to use the Microsoft Access Code Conversion Workbench. Before performing the code conversion with the Microsoft Access Code Conversion Workbench, you should have already imported the Microsoft Access database into FmPro Migrator, including tables, relationships, value lists, forms/reports and scripts.

Access to FmPro Migration Button - GUI Tab



Click the <u>Access to FmPro Migration</u> button on the GUI tab of the Migration Process window of FmPro Migrator.

	Access to FmPro Migration Service
Instructions:	
Migrate Microsoft Access Databases to FileMaker Pro: Step 1) Drag & Drop the Access accdb/mdb file onto the Step #1 button to gather info about the	Access DDR File: WIND 2007_Info/Northwind 2007.txt Browse Forms/Reports Qty: 49
gather info about the tables/fields and relationships within the Access database file.	Processing Type: Licensed C 1
Step 2) Uncompress the AccessDDRExport.zip file saved to the output directory. [These files were saved automatically when the Access to FmPro Migration	Migrate 4

Prior to reaching this step, you should have already selected the (1) Licensed item from the Processing Type menu, (2) copied your license key from your purchase email, (3) selected the AccessDDRExport text file and (4) clicked the Migrate button to import the Access database metadata into FmPro Migrator. You may have already started building the new FileMaker Pro database which would mean that you are ready (5) to click the Code Conversion Workbench button.

Microsoft Access Code Conversion Workbench Window

•				Code Conversion Workbench	
A	+		Micros Workb	oft Access Code Con ench	version
Completed	: 2 o			Source Script (Editable): Size: 175 Module: Order Details:Form_Order Details	Source:
Status		1 Size	Script Name	Option Compare Database Option Explicit	Microsoft Access
Completed	1	175	Open Script	Sub SetDefaultShippingAddress() If IsNull(Me![Customer ID]) Then	Output Language:
Completed	2	46	Clear Sort Indicator	ClearShippingAddress Else	FileMaker Pro 3
Completed	3	35	Toggle Window	Dim rsw As New RecordsetWrapper If rsw.OpenRecordset("Customers Extended", "[ID] = " & Me.Customer_ID)	
Not Started	4	675	Find		Convert
Not Started	5	59	Go to Form Layout	Command (Editable): Translate this Microsoft Access VBA code into FileMaker Pro script	
Not Started	6	66	Go to Information Layout	Translate this Microsoft Access VBA code into FileMaker Pro script	Vendor: OpenAl
Not Started	7	66	Go to List Layout		
Not Started	8	354	Sort by Category		
Not Started	9	333	Sort by Item		
Not Started	10	339	Sort by Model		API Key: dcsi
Not Started	11	381	Sort by Serial Number	Converted Script: "'FileMaker Pro	
Not Started	12	369	Sort by Assigned To	#Module: Order Details:Form_Order Details #SetDefaultShippingAddress	Model:
Not Started	13	355	Sort by Location	If IsEmpty(GetField("Customer ID")) Then Perform Script ["ClearShippingAddress"] Else	gpt-3.5-turbo
	14	228		Set Variable [\$rsw; Value:New RecordsetWrapper] If \$rsw.OpenRecordset("Customers Extended": "[ID] = " & GetField("Customer	Tokens Used Today: 597
Not Started			Sort by Category Ascending	ID")) Then With \$rsw.Recordset Set Field ["Ship Name"; \$rsw.Recordset.GetField("Contact Name")]	Output Filename: Open Script.txt
Not Started	15	229	Sort by Category Descending	Set Field "Ship Address"; \$rsw.Recordset.GetField("Address")] Set Field "Ship City"; \$rsw.Recordset.GetField("City")] Set Field "Ship State/Province";	
Not Started	16	188	Sort by Item Ascending	\$rsw.Recordset.GetField("State/Province")] Set Field ["Ship ZIP/Postal Code"; \$rsw.Recordset.GetField("ZIP/Postal Code")]	
Not Started	17	189	Sort by Item Descending	Set Field ["Ship Country/Region"; \$rsw.Recordset.GetField("Country/Region")]	
Not Started	18	190	Sort by Model Ascending	End With End If End If	
Not Started	19	191	Sort by Model Descending		Need Help?

By default, the Microsoft Access Code Conversion Workbench window opens with the (1) scripts listed in the grid, (2) Microsoft Access selected as the Source Database Type and (3) FileMaker Pro selected as the destination language.

Just because the options are selected a certain way when the window opens, doesn't mean you can't change them. You can easily change the default settings on this window for Output Language, Vendor, API Key Type, or Al Model - and the changes will be saved into the project or application preferences for FmPro Migrator.

Microsoft Access Code Conversion Workbench Demo

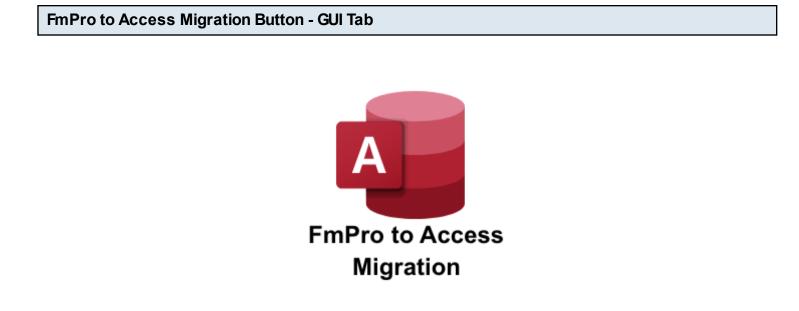


Microsoft Access Code Conversion Workbench Demo

If you forgot to enter your license key or didn't have a license for the Al Accelerated version of FmPro Migrator, then the Microsoft Access Code Conversion Workbench will open in Demo mode. Apreviously converted set of sample scripts will be displayed in the grid instead of the scripts from your own Microsoft Access database. Clicking any of the scripts will display the text "This demo only includes a few scripts." in the Source Script field.

[At the present time, there aren't any Microsoft Access demo scripts.]

This chapter shows how to use the FmPro Code Conversion Workbench. Before performing the code conversion with the FmPro Code Conversion Workbench, you should have already imported the FileMaker Pro database into FmPro Migrator, including tables, relationships, value lists, layouts and scripts.



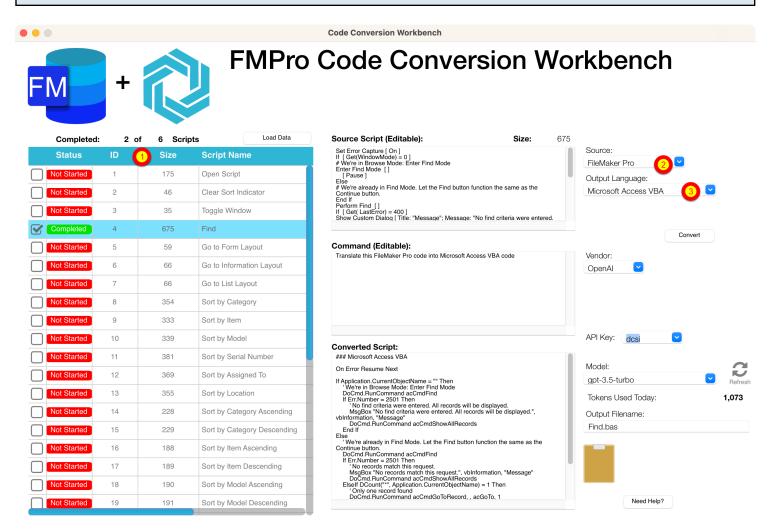
Click the <u>FmPro to Access Migration</u> button on the GUI tab of the Migration Process window of FmPro Migrator.

	FmPro to Access Migration Service	
Instructions:		
Migrate FileMaker		
Pro Databases to		
Access:		1
Step 1) Import		
information about the	Layout Qty: 21	
FileMaker Pro		
database(s) into	Processing Type: Licensed 📀 🚺	
FmPro Migrator		
Developer Edition following the info in	License Key:	
the Table		
Consolidation	Valid License Key Valid Until 4/1/2032 (500 Layouts)	
Procedure PDF file.	Valid Ontil 4/1/2032 (500 Layouts)	
	21 Layouts Processed in 2.4 Sec.	
Step 2) Migrate the	34 Scripts Processed.	
data and the tables		
into the new Access		
file using the buttons		
on the Tables tab.		
Step 3) Use the		
Demo mode or order	Migrate	

Prior to reaching this step, you should have already imported the FileMaker Pro database into FmPro Migrator, selected the (1) Licensed item from the Processing Type menu, (2) copied your license key from your purchase email, (3) clicked the Migrate button to create the new Access database and run the _LoadAllFormsAndReports.bas script within the AccessDBFiles folder. After you have built the new Access database with all of the new forms/reports converted from the FileMaker Pro database you are ready (4) to click the Code Conversion Workbench button.

Note: Using the FmPro Code Conversion Workbench replaces the need to run the existing _FmProConvertedScriptsVBA.bas VBAscript.





By default, the FmPro Code Conversion Workbench window opens with the (1) scripts listed in the grid, (2) FileMaker Pro selected as the Source Database Type and (3) Microsoft Access VBA selected as the Output Language.

Just because the options are selected a certain way when the window opens, doesn't mean you can't change them. You can easily change the default settings on this window for Output Language, Vendor, API Key Type, or Al Model - and the changes will be saved into the project or application preferences for FmPro Migrator.

FmPro Code Conversion Workbench Demo



If you forgot to enter your license key or didn't have a license for the Al Accelerated version of FmPro Migrator, then the FmPro Code Conversion Workbench will open in Demo mode. Apre-converted set of sample scripts will be displayed in the grid instead of the scripts from your own FileMaker Pro database. Clicking any of the scripts will display the text "This demo only includes a few scripts." in the Source Script field.

[At the present time, there aren't any FileMaker Pro to Access demo scripts.]

Using the FmPro Code Conversion Workbench - FmPro to Servoy Conversions

This chapter shows how to use the FmPro Code Conversion Workbench. Before performing the code conversion with the FmPro Code Conversion Workbench, you should have already imported the FileMaker Pro database into FmPro Migrator, including tables, relationships, value lists, layouts and scripts.

Just because this chapter of the manual is showing the conversion of FileMaker Pro scripts to Servoy, it is also possible to convert Visual FoxPro and Microsoft Access code to Servoy JavaScript.

Servoy Migration Button - GUI Tab



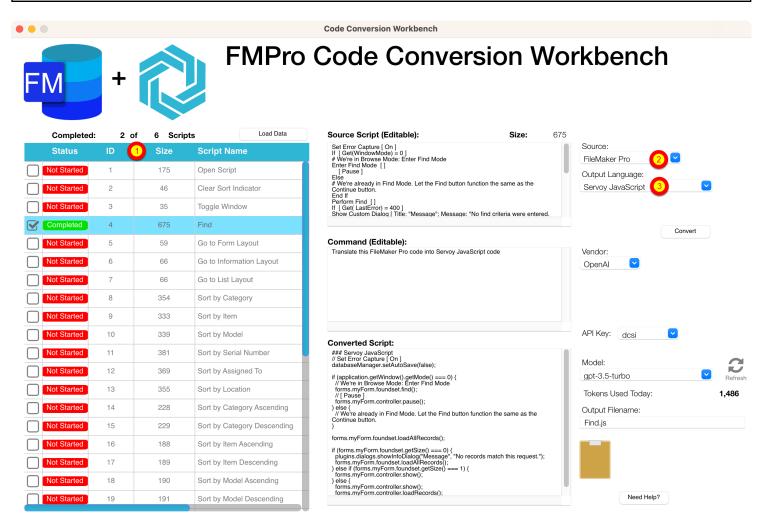
Servoy Migration

Click the <u>Servoy Migration</u> button on the GUI tab of the Migration Process window of FmPro Migrator.

Servoy Migration Service					
Instructions:	6		-		
Migrate FileMaker					Han State
Pro, Microsoft				and the second discovery of the second secon	
Access Databases					
and Visual FoxPro		Layout Qty:	21		
Projects to Servoy:	18	Droject Nomer	project1		
Step 1) Import		Project Name:	projecti		
source database into		DB Connection:	PostgresLocal		
FmPro Migrator		Project Directory:			Browse
Developer Edition					
following the How to		Servoy Version:	7 😳	•	
Import FileMaker Pro,		Processing Type:	Licensed	O 1	
Microsoft Access, or					
Visual FoxPro PDF		License Key:			
documents on the FmPro Migrator		2			
support web page.					
Select Help -> Help					
menu item to open	1				
the support web					
page.					
			Migrate		

Prior to reaching this step, you should have already imported the FileMaker Pro database into FmPro Migrator, selected the (1) Licensed item from the Processing Type menu, (2) copied your license key from your purchase email and created your Servoy project. It is not necessary to click the Migrate button on this window, because you could have created the Servoy project manually. You are now ready (3) to click the Code Conversion Workbench button.





By default, the FmPro Code Conversion Workbench window opens with the (1) scripts listed in the grid, (2) FileMaker Pro selected as the Source Database Type and (3) Servoy JavaScript selected as the Output Language.

Just because the options are selected a certain way when the window opens, doesn't mean you can't change them. You can easily change the default settings on this window for Output Language, Vendor, API Key Type, or Al Model - and the changes will be saved into the project or application preferences for FmPro Migrator.

FmPro Code Conversion Workbench Demo



If you forgot to enter your license key or didn't have a license for the Al Accelerated version of FmPro Migrator, then the FmPro Code Conversion Workbench will open in Demo mode. Apre-converted set of sample scripts will be displayed in the grid instead of the scripts from your own FileMaker Pro database. Clicking any of the scripts will display the text "This demo only includes a few scripts." in the Source Script field.

[At the present time, there aren't any FileMaker Pro to Servoy demo scripts.]

Using the FmPro Code Conversion Workbench - FmPro to PHP Conversions

This chapter shows how to use the FmPro Code Conversion Workbench. Before performing the code conversion with the FmPro Code Conversion Workbench, you should have already imported the FileMaker Pro database into FmPro Migrator, including tables, relationships, value lists, layouts and scripts.

Just because this chapter of the manual is showing the conversion of FileMaker Pro scripts to PHP, it is also possible to convert Visual FoxPro and Microsoft Access code to PHP.

PHP Migration Button - GUI Tab



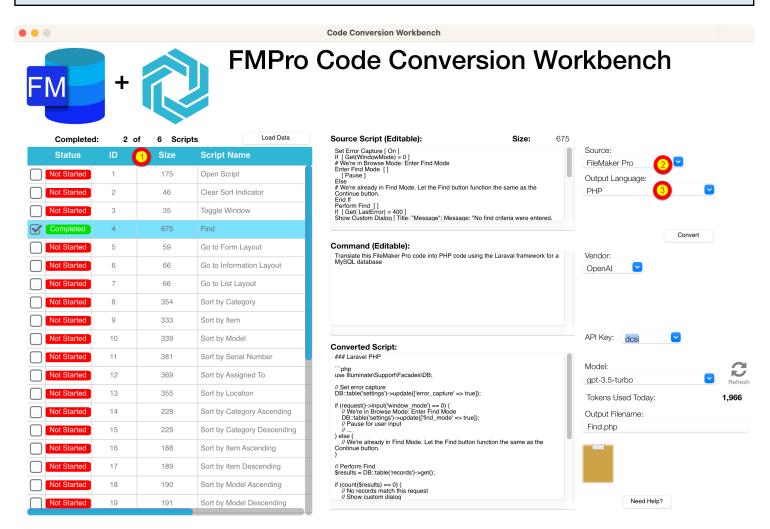
PHP Conversion

Click the <u>PHP Conversion</u> button on the GUI tab of the Migration Process window of FmPro Migrator.

	PHP Co	nversion		
Instructions:			•	php
Convert FileMaker				
Pro, Microsoft Access Databases and Visual FoxPro Applications to	Layout Qty:	21		
PHP:	Layout Gty.	21		
Pre-Conversion	Project Name:	app1		
Steps (required for	Project Directory:	/Applications/MA	AMP/htdocs	Browse
CakePHP): 1) Rename any tables	PHP Framework:	CakePHP	2	0
or TOs named exactly the same as	Processing Type:	Licensed		
CakePHP resource names: (views, controllers, pages, files). 2) Insure that each table has an auto-increment, numeric, primary key	License Key:			
column. FmPro		Convert	9	

Prior to reaching this step, you should have already imported the FileMaker Pro database into FmPro Migrator, selected the (1) Licensed item from the Processing Type menu, (2) copied your license key from your purchase email and (3) created your PHP project with the Convert button. You are now ready to (4) click the Code Conversion Workbench button.





By default, the FmPro Code Conversion Workbench window opens with the (1) scripts listed in the grid, (2) FileMaker Pro selected as the Source Database Type and (3) PHP selected as the Output Language.

Just because the options are selected a certain way when the window opens, doesn't mean you can't change them. You can easily change the default settings on this window for Output Language, Vendor, API Key Type, or Al Model - and the changes will be saved into the project or application preferences for FmPro Migrator.

In this example, you can see that Laraval has been written into the conversion prompt and that MySQL is the output database. This text is fully modifiable, giving the developer the option to enter any PHP framework or database server.

FmPro Code Conversion Workbench Demo



If you forgot to enter your license key or didn't have a license for the Al Accelerated version of FmPro Migrator, then the FmPro Code Conversion Workbench will open in Demo mode. Apre-converted set of sample scripts will be displayed in the grid instead of the scripts from your own FileMaker Pro database. Clicking any of the scripts will display the text "This demo only includes a few scripts." in the Source Script field.

Using the FmPro Code Conversion Workbench - FmPro to LiveCode Conversions

This chapter shows how to use the FmPro Code Conversion Workbench. Before performing the code conversion with the FmPro Code Conversion Workbench, you should have already imported the FileMaker Pro database into FmPro Migrator, including tables, relationships, value lists, layouts and scripts.

Just because this chapter of the manual is showing the conversion of FileMaker Pro scripts to LiveCode, it is also possible to convert Visual FoxPro and Microsoft Access code to LiveCode.

LiveCode Conversion Button - GUI Tab	

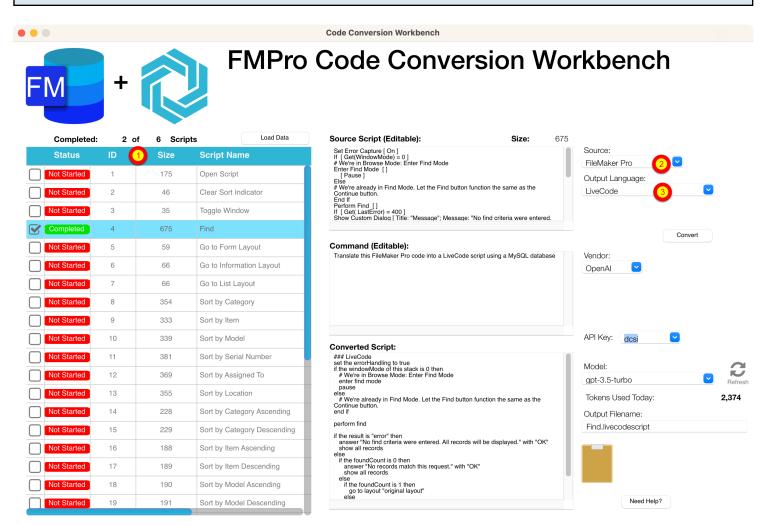


Click the <u>LiveCode Conversion</u> button on the GUI tab of the Migration Process window of FmPro Migrator.

•••	Convert Datab	pase to LiveCode
Instructions:		
Migrate Databases		Desktop, Mobile, Server
to LiveCode:		
Step 1) Import	Layout Qty:	21
information about the FileMaker Pro. or	Output File Type:	Application 😌
Access or Visual		
FoxPro project into	Card Script Status:	Normal 📀
FmPro Migrator	Database Framework:	SQL 0
Platinum Edition.	Database Framework.	SQL 💟
Step 2) Select the type of LiveCode stack file to create:	Processing Type:	Licensed C
Application.		
Note : FmPro Migrator will delete & re-create the stack file named Application.livecode	License Key:	
in the output directory. Step 3) Select either	Export Template Stack	4 Migrate

Prior to reaching this step, you should have already imported the FileMaker Pro database into FmPro Migrator, selected the (1) Licensed item from the Processing Type menu, (2) copied your license key from your purchase email and (3) created your new LiveCode stack with the Migrate button. You are now ready to (4) click the Code Conversion Workbench button.





By default, the FmPro Code Conversion Workbench window opens with the (1) scripts listed in the grid, (2) FileMaker Pro selected as the Source Database Type and (3) LiveCode selected as the Output Language.

Just because the options are selected a certain way when the window opens, doesn't mean you can't change them. You can easily change the default settings on this window for Output Language, Vendor, API Key Type, or Al Model - and the changes will be saved into the project or application preferences for FmPro Migrator.

In this example, you can see that LiveCode has been written into the conversion prompt and that MySQL is the output database. This text is fully modifiable giving the developer the option to enter any database server.

FmPro Code Conversion Workbench Demo



If you forgot to enter your license key or didn't have a license for the Al Accelerated version of FmPro Migrator, then the FmPro Code Conversion Workbench will open in Demo mode. Apre-converted set of sample scripts will be displayed in the grid instead of the scripts from your own FileMaker Pro database. Clicking any of the scripts will display the text "This demo only includes a few scripts." in the Source Script field.

[At the present time, there aren't any FileMaker Pro to LiveCode demo scripts.]

This chapter shows how to use the VFP Code Conversion Workbench. Before performing the code conversion with the FmPro Code Conversion Workbench, you should have already imported the Visual FoxPro project into FmPro Migrator, including tables, relationships, value lists, forms/reports and scripts.

Just because this chapter of the manual is showing the conversion of Visual FoxPro scripts to .NET, it is also possible to convert FileMaker Pro and Microsoft Access code to .NET.

LiveCode Conversion Button - GUI Tab		
	_	
	.NET	
	Framework	
	.NET	
	Conversion	

Click the <u>.NET Conversion</u> button on the GUI tab of the Migration Process window of FmPro Migrator.

•••	.Net Conve	ersion Service	•	
Instructions:	2	•	.NE	Т
Migrate Databases to .Net Projects: Step 1) Import information about the			Framew	ork
FileMaker Pro, Access database, or	Layout/Form Qty:	21		
Visual FoxPro project into FmPro Migrator	Project Name:	Assets		
Developer Edition.	Project Directory:			Browse
Step 2) Enter the	Data Source:	AssetsDB		
Visual Studio project which will be created.	Processing Type: License Key:	Licensed	0	
Step 3) Select the project directory where the C# and VB Visual Studio projects will be created. Note: Two new project directories will be created within the selected project	2 NET Framework			
directory. One projec		Migrate	3	

Prior to reaching this step, you should have already imported the Visual FoxPro project into FmPro Migrator using the Visual FoxPro Conversion button on the GUI tab, selected the (1) Licensed item from the Processing Type menu, (2) copied your license key from your purchase email and (3) created your new .NET project with the Migrate button. You are now ready to (4) click the Code Conversion Workbench button.

FmPro Code Conversion Workbench Window **Code Conversion Workbench VFP Code Conversion Workbench** Load Data 2 of 6 Scripts Source Script (Editable): Size: 976 Completed: PROCEDURE SolutionErrHandle Source: Size CAL inChoice #DEFINE ERR_LOC "Error: " #DEFINE FILEINUSE_LOC "A form cannot simultaneously be open in des Visual FoxPro Not Started 1 2441 pgraph.prg #DEFINE FILEREADONLY_LOC "One of the necessary files is marked as read-only." + CHR(13) + "Please make sure you have read and write access to the file." Output Language: Not Started 2 4760 C# cgraph.prg DO CASE CASE ERROR() = 3 && File is in use =MESSAGEBOX(ERR_LOC + MESSAGE() + CHR(13) + ; Procedure/Function: Completed 3 6788 main.prg SolutionErrHandle 168-197 4 14406 fdproc.prg Convert 5 20234 datepick.prg Command (Editable): Translate this Visual FoxPro code into C# code Vendor: 6 1207 frmanimation OpenAl API Key: dcsi **Converted Script:** ```csharp using System; Model: public class SolutionErrHandle gpt-3.5-turbo public void HandleError() { int InChoice; const string ERR_LOC = "Error: "; const string FLEFINUSE_LOC = "A form cannot simultaneously be open in design mode and running."; const string FILEREADONLY_LOC = "One of the necessary files is marked as read-only/nPlease make sure you have read and write access to the file."; Tokens Used Today: 3.238 Output Filename: main_SolutionErrHandle.cs switch (Error()) {
 case 3: // File is in use
 MessageBoxShow(ERR_LOC + Message() + "\n" + FILEINUSE_LOC,
 ", MessageBoxButtons.OK, MessageBoxIcon.Error);
 break; case 1718: // File is read-only MessageBox.Show(ERR_LOC + Message() + "\n" + FILEREADONLY_LOC, "", MessageBoxButtons.OK, MessageBoxIcon.Error); Need Help?

By default, the VFP Code Conversion Workbench window opens with the (1) scripts listed in the grid, (2) Visual FoxPro selected as the Source Database Type and (3) C# selected as the Output Language.

Just because the options are selected a certain way when the window opens, doesn't mean you can't change them. You can easily change the default settings on this window for Output Language, Vendor, API Key Type, or AI Model - and the changes will be saved into the project or application preferences for FmPro Migrator.

VFP Code Conversion Workbench Demo



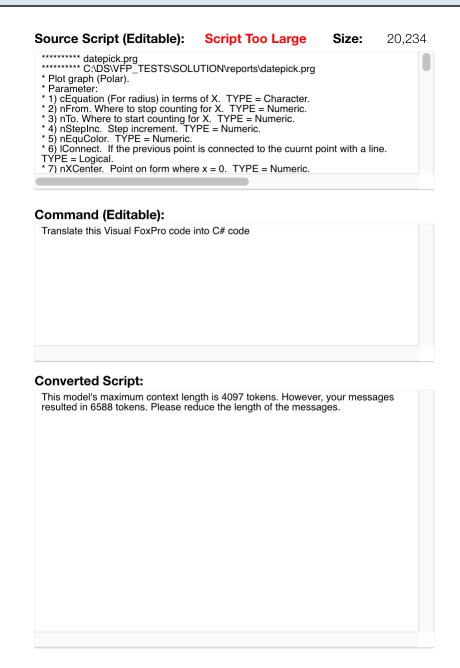
VFP Code Conversion Workbench Demo

If you forgot to enter your license key or didn't have a license for the Al Accelerated version of FmPro Migrator, then the VFP Code Conversion Workbench will open in Demo mode. Apre-converted set of sample scripts will be displayed in the grid instead of the scripts from your own Visual FoxPro project.

Clicking the Convert button will place the pre-converted script into the Converted Script field.

Troubleshooting

Script Too Large - Error Returned From Model



This screenshot shows an example of a large script which exceeds the 4097 tokens available with the selected AI model. This message was returned from the server and it shows that there are 6589 tokens contained in the 20,234 characters of text sent to the model. <u>A token represents</u> <u>approximately 1 to 3 characters of text</u>. Fortunately, there are models available with a capacity of up to 16,000 tokens.

1) One potential solution is to use one of the 16K token capacity models like gpt-3.5-turbo-16k.

2) Another option is to try breaking up the script into individual procedures/functions. This can be advantageous even when a 16K model is available because sometimes the larger capacity models get overloaded.



Source Script (Editable):		Size:	1,207
********** File: C:\DS\VFP_TESTS ********** Object: frmanimation PROCEDURE KeyPress LPARAMETERS nKeyCode, nShi this.drawmode = 10		anim.vcx	
ENDPROC PROCEDURE MouseUp LPARAMETERS nButton, nShift, IF THIS.Pendown thisform.line(this.oldx,this.oldy this.drawmode = 1			
Command (Editable): Translate this Visual FoxPro code	e into C# code		
		worted T	
	e into C# code Script Not Cor	nverted - To	oo Long
Translate this Visual FoxPro code		nverted - To	oo Long

This error is not returned from the server, it is displayed by the Code Conversion Workbench as a result of not receiving a response from the server. Therefore it is estimated by the software that the result could be due to the script being too long.

But it is also possible that the model was overloaded on the server. The gpt4 model was used for this test and experience has shown that the gpt4 model seems to get overloaded more often than the gpt-3.5-turbo model.

1) One possible solution is to break up the script into smaller amounts of text. Even though the script is reasonably sized, but since this script contains 4 individual procedures they could be converted separately - especially if you really require the additional code conversion quality of the gpt4 model.

2) Switching models from gpt4 to gpt-3.5-turbo is another option.

3) Trying again after a few minutes if the model is overloaded. Sometimes the models seem to work more quickly on weekends compared with during the work week.

4) Verify that your internet connection is functioning properly.