

MQL4 COURSE

By Coders' guru

-10-

Your First Indicator Part 1

Welcome to the practical world of MQL4 courses; welcome to your first indicator in MQL4.

I recommend you to read the previous nine lessons very carefully, before continuing with these series of courses, that's because we will use them so much in our explanations and studies of the Expert Advisors and Custom Indicators which we will create in this series of lessons.

Today we are going to create a simple indicator which will not mean too much for our trade world but it means too much to our MQL4 programming understanding.

It simply will collect the subtraction of **High** [] of the price – **Low** [] of the price; don't be in a hurry, you will know everything very soon.

Let's swim!

MetaEditor:

This is the program which has been shipped with MT4 (MetaTrader 4) enables you to write your programs, read MQL4 help, compile your program and More.

I've made a shortcut for MetaEditor on my desktop for easily access to the program. If you want to run MetaEditor you have three choices.

- 1- Run MT4, then click **F4**, choose MetaEditor from Tools menu or click its icon on the Standard toolbar (Figure 1).
- 2- From Start menu → Programs, find MetaTrader 4 group then click MetaEditor.
- 3- Find the MT4 installation path (usually C:\Program Files\MetaTrader 4), find the MetaEditor.exe and click it (I recommend to make a shortcut on you desktop).



Figure 1 – MetaTrader Standard Toolbar

Any method you have chosen leads you to MetaEditor as you can see in figure 2.

As you can see in figure 2, there are three windows in MetaEditor:

- 1- The Editor window which you can write your program in.
- 2- The Toolbox window which contains three tabs:
 - a. Errors tab, you see here the errors (if there any) in your code.
 - b. Find in files tab, you see here the files which contain the keyword you are searching for using the toolbar command “Find in files” or by clicking CTRL +SHIFT+ F hotkeys.
 - c. Help tab, you can highlight the keyword you want to know more about it and click F1, and you will see the help topics in this tab.
- 3- The Navigator window which contains three tabs:
 - a. Files tab, for easy access to the files saved in the MT4 folder.
 - b. Dictionary tab enables you to access the MQL4 help system.
 - c. Search tab enables you to search the MQL4 dictionary.

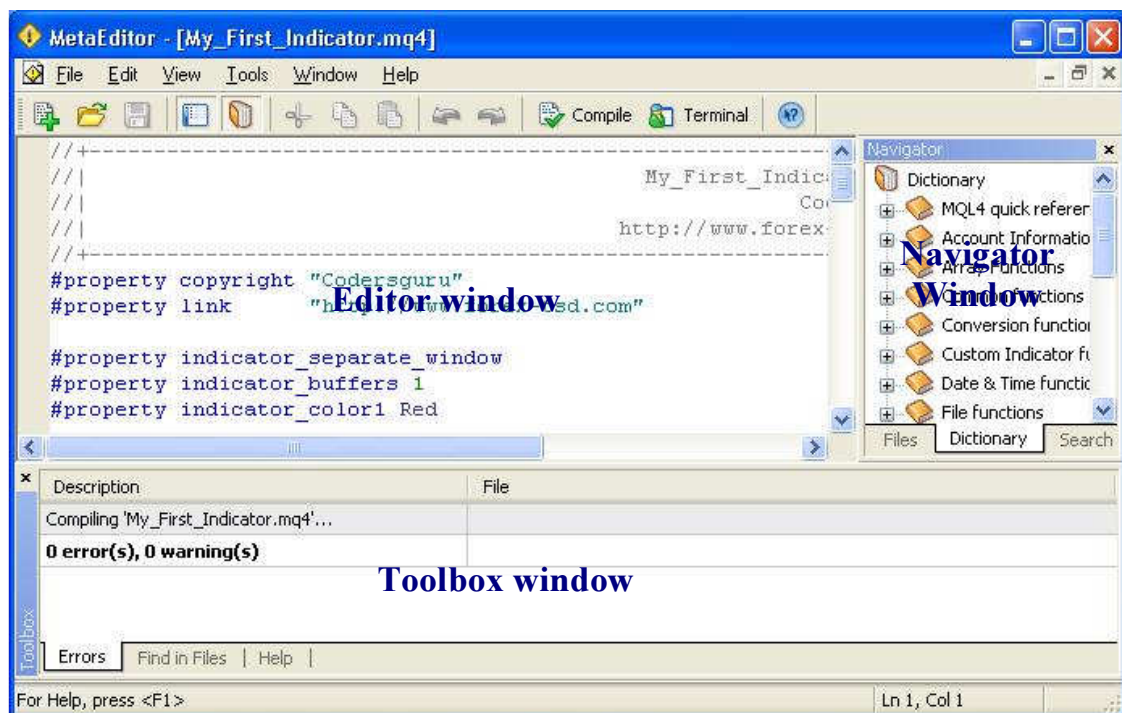


Figure 2 – MetaEditor Windows

I recommend you to navigate around the MetaEditor Menus, Toolbar and windows to be familiar with it.

Now let's enjoy creating our first custom indicator.

Custom Indicator is a program which enables you to use the functions of the technical indicators and it cannot automate your deals.

First three steps:

Now you have run your MetaEditor and navigated around its Menus, Toolbar and windows, let's USE it.

To create a custom indicator you have to start with three steps (you will learn later how to skip these boring steps (my personal opinion)).

Step 1: Click **File** menu → **New** (you use CTRL+N hotkey or click the New Icon in the Standard toolbar).

You will get a wizard (Figure 3) guiding you to the next step.

Choose Custom Indicator Program option, and then click next.

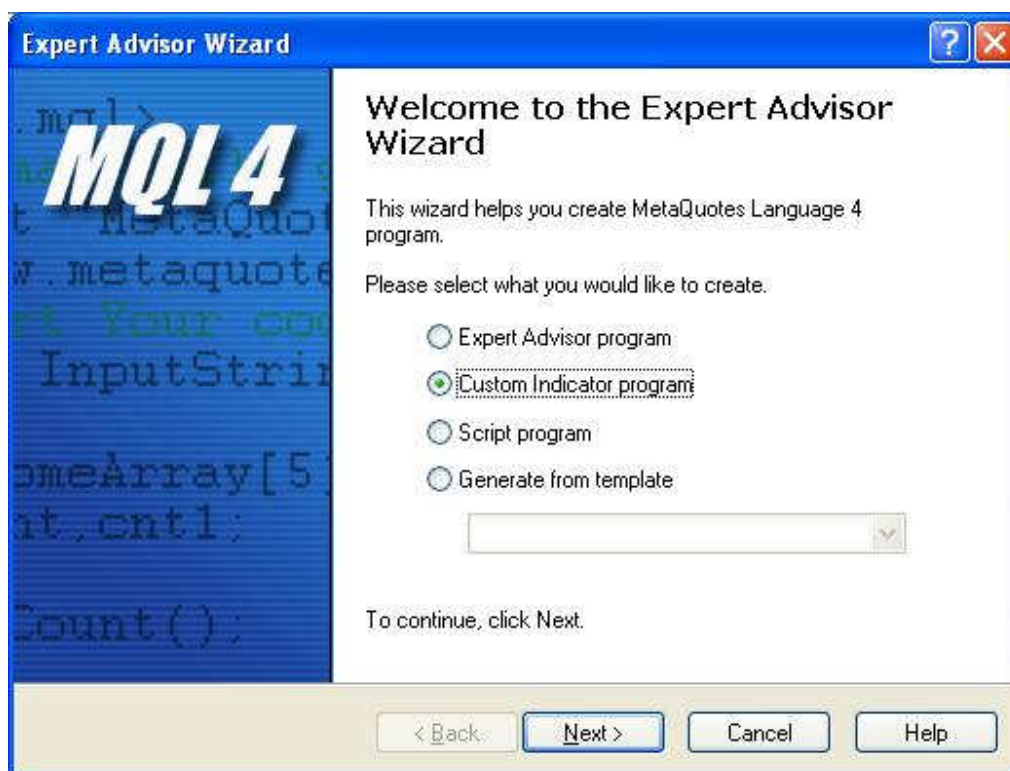


Figure 3 - New project wizard

Step 2: When you clicked **Next**, you will get the second step wizard (Figure 4) which will enable you to edit the properties of your program. In this step you can enter these properties:

1- **Name** of your program, this is the name which the world will call you program with and it will be saved as **the_name_you_have_chosen.mq4**

2- **Author** name, the creator of the program name.

3- **Link** to your web site.

4- **External** variables list: I want to pause here to remember you about external variable.

External variables are the variables which will be available to the user of you indicator to set from the properties tab of your indicator in MetaTrader. For example: **MA_Period** in the very popular **EMA** indicator. And these variables will be declared with the “**extern**” keyword in your code (Please review **Variables** lesson).

So, this section of the wizard enables you to add these kinds of variables.

In our first indicator example we will not need any external variables just write the values you see in figure 4 and let’s go to step 3 by clicking **Next** button.

Name	Type	Initial value
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Figure 4 – Program properties wizard.

Step 3: The third wizard you will get when you clicked **Next** button is the Drawing properties wizard (Figure 5).

Its job is enabling you to set the drawing properties of the lines of your indicator, for example: how many lines, colors and where to draw your indicator (in the main chart or in separate windows).

This wizard contains the following options:

- 1- **Indicator in separate window** option: by clicking this option, your indicator will be drawn in separate windows and not on the main chart window. If you didn't check the option, your indicator will be drawn in the main chart window.
- 2- **Minimum** option: it will be available (enabled) only if you have checked the Indicator in separate window option, and its job is setting the bottom border for the chart.
- 3- **Maximum** option: it will be available (enabled) only if you have checked the Indicator in separate window option, and its job is setting the top border for the chart.
- 4- **Indexes List**: here you add your indicator line and set its default colors.

I want you to wait to the next lesson(s) to know more about these options and don't be in a hurry.

For our first indicator example, choose Indicator in separate window option and click **Add** button, when you click add button the wizard will add a line to the indexes list like you see in figure 5.

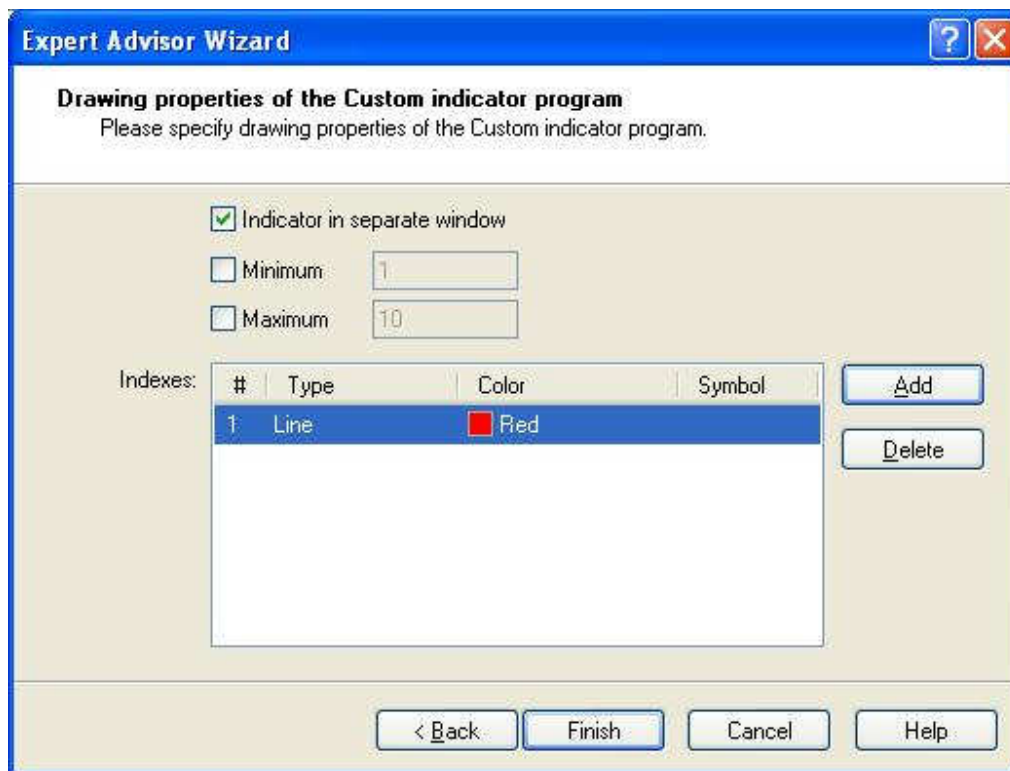


Figure 5 - Drawing properties wizard.

When you click **Finish** button the Magic will start. You will see the wizard disappeared and the focus returned to the MetaEditor environment and... guess what?

You have ready to use first indicator draft code.

This is the code you will get:

```
//+-----+
//|                                     My_First_Indicator.mq4 |
//|                                     Codersguru |
//|                                     http://www.forex-tsd.com |
//+-----+
#property copyright "Codersguru"
#property link      "http://www.forex-tsd.com"

#property indicator_separate_window
#property indicator_buffers 1
#property indicator_color1 Red
//---- buffers
double ExtMapBuffer1[];
//+-----+
//| Custom indicator initialization function |
//+-----+
int init()
{
//---- indicators
    SetIndexStyle(0,DRAW_LINE);
    SetIndexBuffer(0,ExtMapBuffer1);
//----
    return(0);
}
//+-----+
//| Custor indicator deinitialization function |
//+-----+
int deinit()
{
//----

//----
    return(0);
}
//+-----+
//| Custom indicator iteration function |
//+-----+
int start()
{
    int    counted_bars=IndicatorCounted();
//----

//----
    return(0);
}
//+-----+
```

As you see in the above code, the wizard has written a lot of code for you, now I have to thank the wizard and to thank you too.

In the next lesson we will discover every line of code you have seen above and add our code to make our first indicator. To this lesson I hope you be ready!

Please don't forget to download the source code of the first indicator and warm yourself for the next lesson.

I welcome very much the questions and the suggestions.

See you
Coders' Guru
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