MQL4 COURSE

By Coders' guru

(Appendix 1)

Bars

I have got a lot of questions about the mystery of the bars count.
I'm going to describe everything about Bars in this appendix.

What's a BAR?

The bar is the dawning unit on the chart which you can specify by choosing the period of the timeframe.

For example: The 30 minutes timeframe will draw a bar every 30 minutes.

MetaTrader (and other platforms) uses the values of to high, low, open and close prices to draw the bar start and end boundaries. (Figure 1)
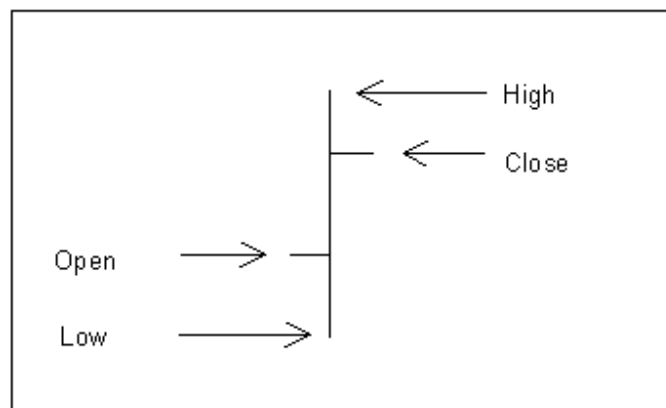
Figure 1 - Bar chart dawning

How the bars indexed in MQL4?

MQL4 indexes the bars from **0** (for the current bar) then 1, 2, 3 etc to the count of the bars.
So, if you want to work with the current bar you use the index **0**.
And the index of the previous bar (of the current bar) is **1**.
And the index 100 is the bar 100 in the history (100 bars ago).
And the index of last bar is the count of all bars on chart.

MQL4 BARS count functions:

In MQL4 there is a variety of functions working with the count of bars:

int Bars

This function returns the number of the bars of the current chart.

Note that, changing the timeframe will change this count.

int iBars(string symbol, int timeframe)

This function returns the number of bars on the specified currency pairs symbol and timeframe.
Assume you are working on 30M timeframe and you want to get the count of **Bars** on 1H time frame, you use this line:

```
iBars(NULL, PERIOD_H1));
```

Note: If you used it like this:

```
iBars(NULL,0));
```

*It returns the same number as **Bars** function.*

int IndicatorCounted()

When you are writing your indicator, you know now how to get the number of bars.
You use this number in your calculation and line dawning.

But it's useful to know if you have counted the bar before or it's the first time you count it. That's because, if you have counted it before you don't want to count it again and want to work only with the new bars.

In this case you use the function **IndicatorCounted(),** which returns the number of bars have been counted by your indicator.

At the first run of your indicator this count will be zero, that's because your indicator didn't count any bars yet.
Afterwards, it will equal to the count of Bars – 1. That's because the last bar not counted yet (Figure 2).

Figure 2 – Program output

Let's write a small program to show you what's going on.

```
//+------------------------------------------------------------------+
//|                                                        Bars.mq4   |
//|                                                      Codersguru   |
//|                                          http://www.forex-tsd.com |
//+------------------------------------------------------------------+
#property copyright "Codersguru"
#property link       "http://www.forex-tsd.com"
#property indicator_chart_window
//+------------------------------------------------------------------+
//| Custom indicator initialization function                         |
//+------------------------------------------------------------------+
int init()
   {
//---- indicators

//----
   return(1);
   }
//+------------------------------------------------------------------+
//| Custor indicator deinitialization function                      |
//+------------------------------------------------------------------+
int deinit()
   {
//----

//----
   return(0);
   }
//+------------------------------------------------------------------+
//| Custom indicator iteration function                              |
//+------------------------------------------------------------------+
int start()
   {
//----
   Alert( "counted_bars = " , IndicatorCounted()); //The count of bars
have been counted
   Alert( "Bars = " , Bars); //The count of the bars on the chart
   Alert( "iBars = " , iBars(NULL,0)); //the same as Bars function
   Alert( "First Bar Open = " , Open[Bars-1]); //Open price of the
first bar
```

```
   Alert( "Last Bar Open = " , Open[0]); //Open price of the last bar
(current bar)
//----
   return(0);
  }
//+------------------------------------------------------------------+
```

Note: This program produces the image you have seen in figure 2

I hope the Bars count is clear now.
I welcome very much the questions and the suggestions.

See you
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