SUM3API: Using Rust, ZeroMQ, and MetaQuotes Language (MQL5) API Combination to Extract, Communicate, and Externally Project Financial Data from MetaTrader 5 (MT5)
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A GUIDE

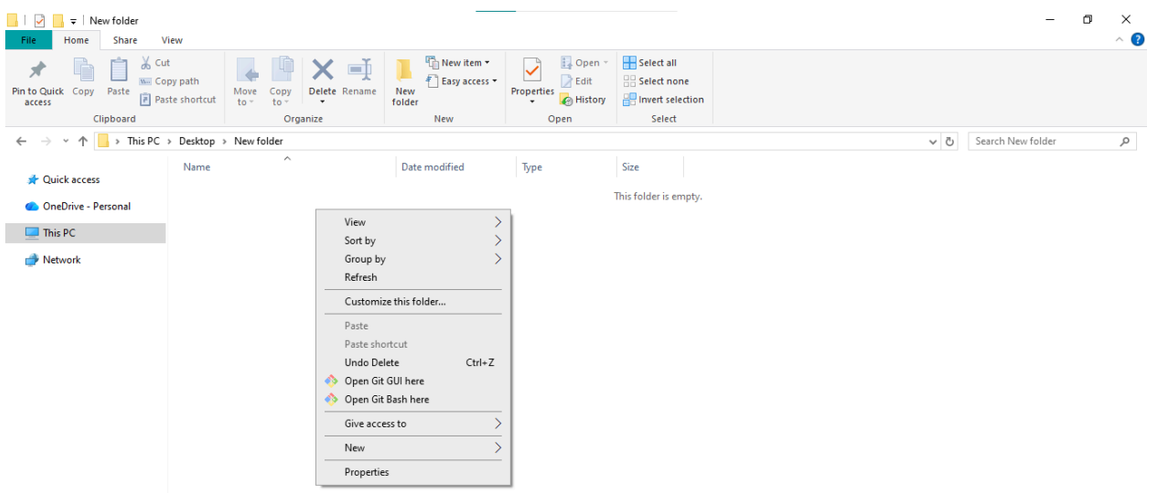
In my case, I've already installed applications such as Git, Rust, VisualStudio C++ Build tools, MetaTrader5, and MetaEditor5. Overall, I'm working on Google Antigravity (you may use any code editor) as long as we have a terminal. Any version would do.

The implementation is done inside a 7-year old Windows 10 Pro 64-bit laptop with 8GB RAM and Intel Core i5-7200U CPU @ 2.50GHz 2.71 GHz, NVIDIA GeForce 940MX, and 256GB SSD (I'm broke but can stop learning)

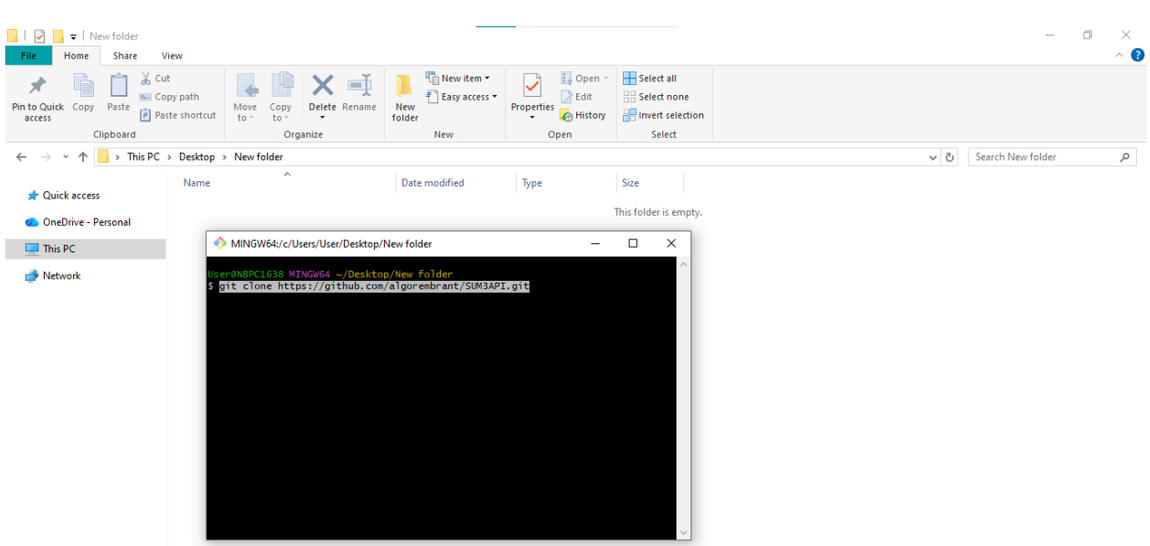
So you wanted to open the SUM3API software (trading terminal)? Thank you for being here. I will guide you as simply as possible.

Follow as we go,

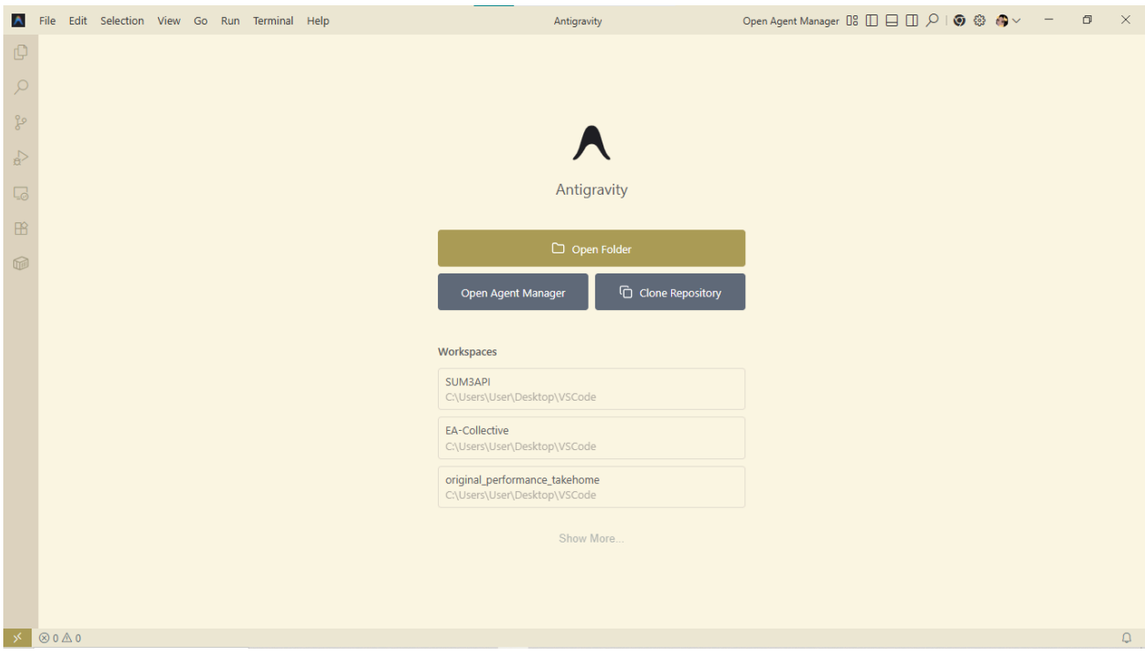
Select your preferred directory from your local computer. Right-click and press '*Open Git Bash here*' (it will show you the terminal with the designated path).



Clone my GitHub repository, bash: `git clone https://github.com/algorembrant/SUM3API.git` (copy-n-paste that to the terminal)

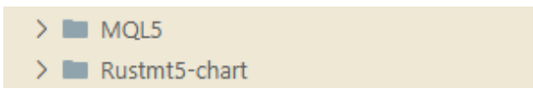


Open your preferred code editor (in my case, I use Google's Antigravity)



Select the 'SUM3API' Folder to edit (it's the cloned repo)

You will notice these 2 main folders for the **SUM3API:** Using Rust, ZeroMQ, and MetaQuotes Language (MQL5) API Combination to Extract, Communicate, and Externally Project Financial Data from MetaTrader 5 (MT5) project. Yes, you only need those two for codes and software (trading terminal).



If you open it, it will look like this (btw, I use 'Material Icon Theme' Extension for folder/file icons)
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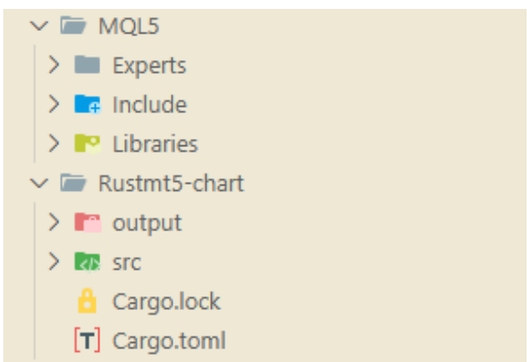
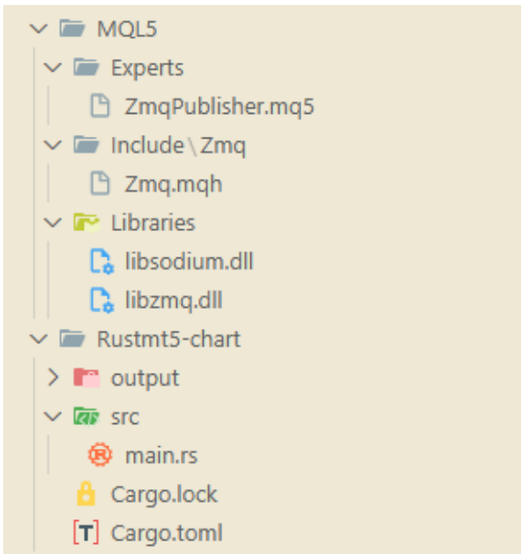
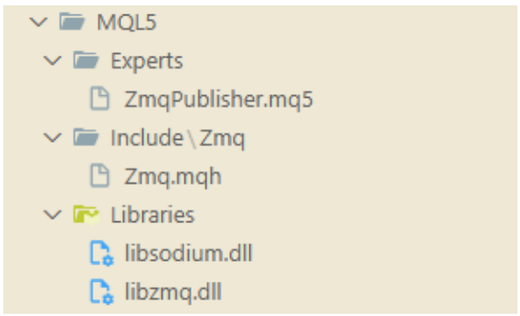


And to look for all necessary files, just open those folders. Both libsodium.dll file and libzmq.dll file are downloadable on the internet.



We need to relocate the MQL5 Folder's files directory. Currently, we have it inside our repository. Imagine how the file path would look because it's really crucial for the proceeding steps. (eg., MQL5\Experts\ZmqPublisher.mq5)



Now we need these 2 apps, MetaTrader5 and MetaEditor5.

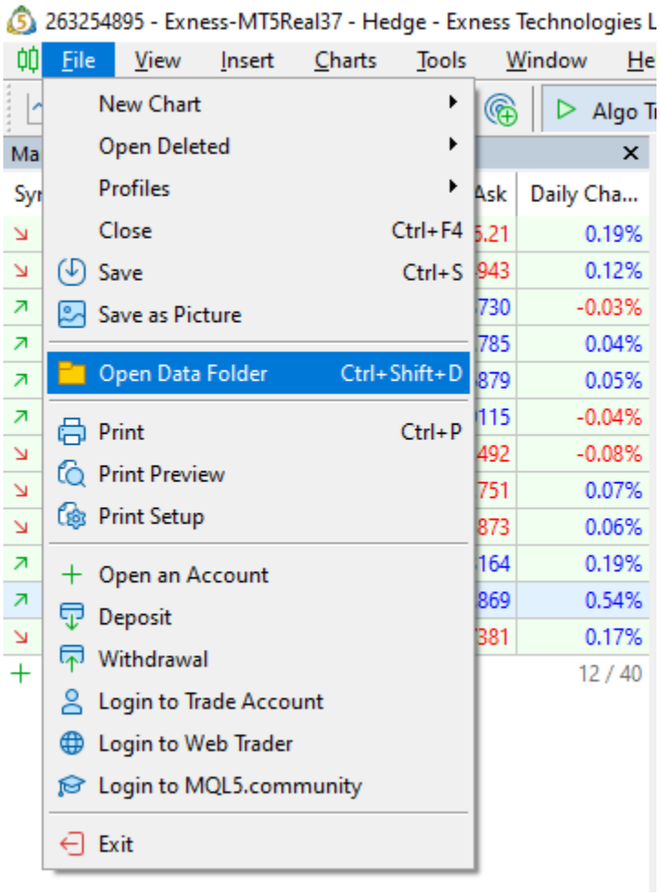
Brace yourself, I will try my best to be as simple and comprehensible as possible.

Open MetaTrader5 and log in to your *trading account* on your preferred Exchange/Broker. In my case, I'm using Exness and a Standard-cent live trading account. Since I'm using a cent-based account, all tradable assets will now have a 'c' suffix (eg., XAUUSDc for gold, and BTCUSDc for Bitcoin, etc.).

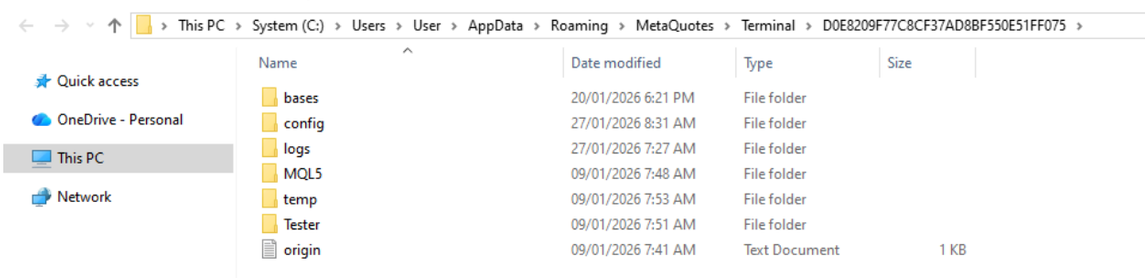
Inside MT5, open 'Market Watch' (ctrl+m). Right-click 'XAUUSDc' (I'm using gold-forex for this implementation demonstration) and select 'Chart Window'. It will look like this (don't mind my open test-order, I turned off my grid, you could change the chart background, not black too)

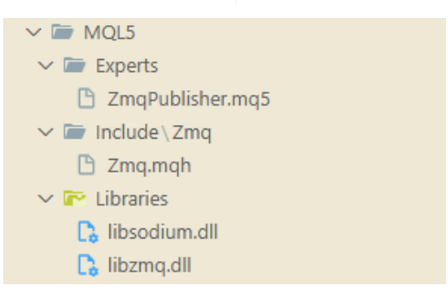
Now, remember these files from our repository? We need to relocate that to the legitimate MT5 folder.

Open 'Open Data Folder' (ctrl+shift+d).



In my case, I will see these. Notice we also have an MQL5 Folder (That is the legitimate path, unlike inside our repository).



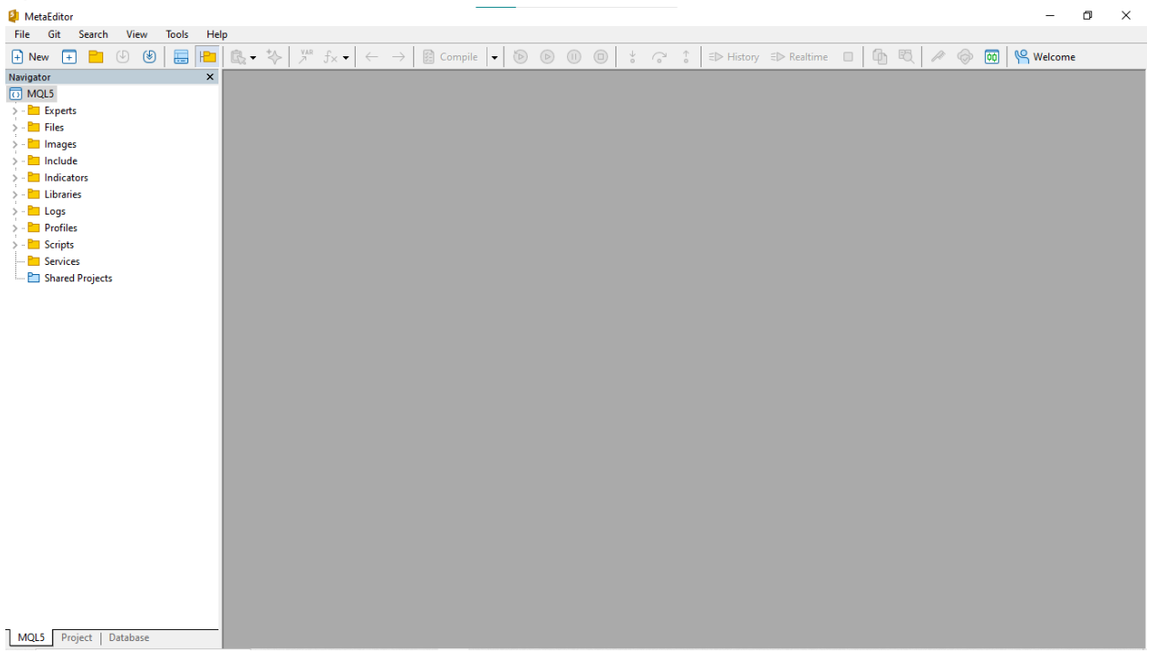


Relocate every single file from our repository to a similar path inside the MT5's MQL5 legit path directory.

For;

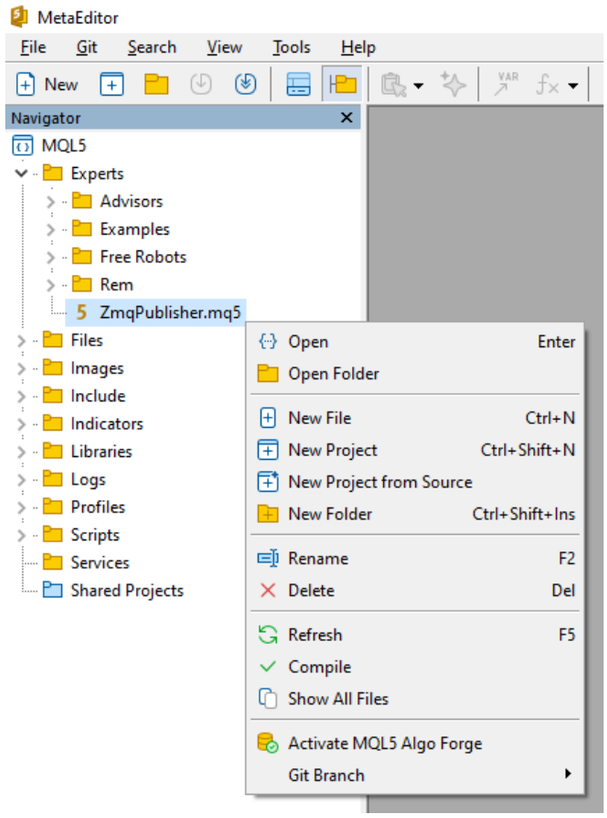
ZmqPublisher.mq5 file: make sure its at \MQL5\Experts\ZmqPublisher.mq5 path
Zmq.mqh file: make sure its at \MQL5\Include\Zmq\Zmq.mqh path
libsodium.dll file: make sure its at \MQL5\Libraries\libsodium.dll path
libzmq.dll file: make sure its at \MQL5\Libraries\libzmq.dll path

Open MetaEditor5



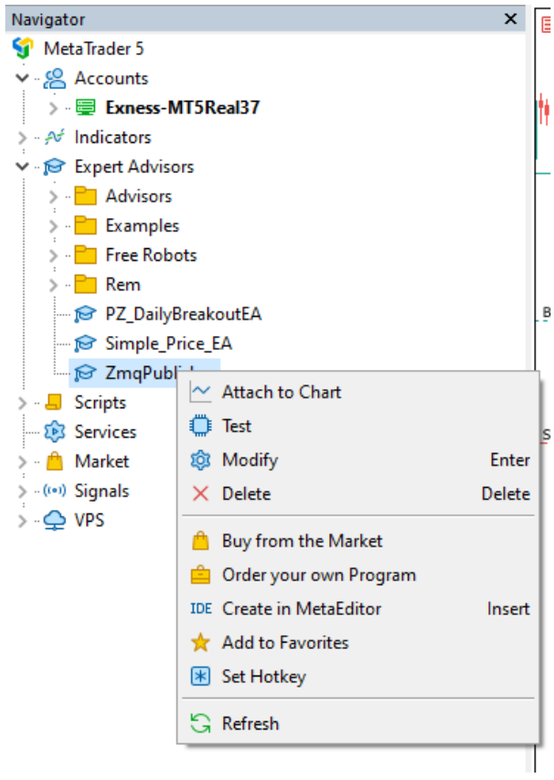
Go to Experts → ZmqPublisher.mq5 → Open (if you wanna see the source code) → press compile on the top, (press F7). The source code is useful, especially if you are using a different Broker. I use an Exness Standard-cent live account, and my ticker/symbols are written with a 'c' suffix (eg, I use XAUUSDc for demonstration). Just change the code-line's symbol if you want. Or

Go to Experts → ZmqPublisher.mq5 → Compile

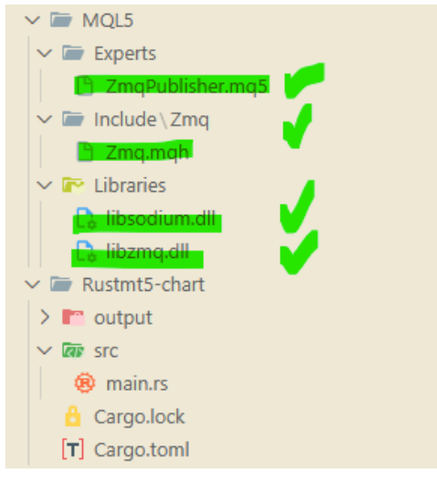


Go back to MetaTrader5 (MT5). Don't mind my test-open position

Go to ‘Navigator’ (ctrl+n) → Expert Advisors → right-click ZmqPublisher.mq5
Press ‘Attach to Chart’ to open or drag ZmqPublisher.mq5 to the main-content area. The EA will work whatever timeframe the chart has. In my case, I run it on XAUUSDc 3-minute timeframe (M3).



With that, we are finished with relocating the contents inside the MQL5 Folder from our repository into the legitimate MT5 path.

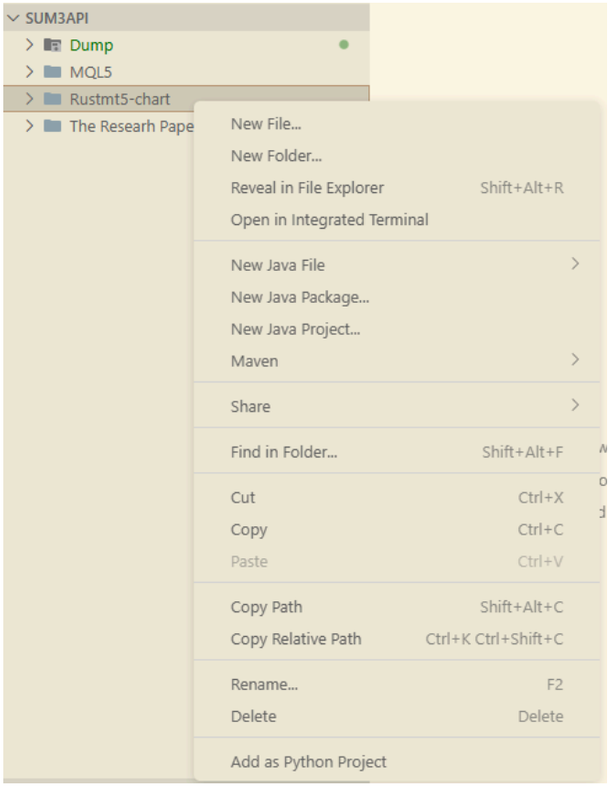


We don't have to do anything for the Rustmt5-chart Folder, no relocation. We simply need to run commands inside a terminal.

For this, I recommend using your raw-terminal. In my case, i cant run Rust commands on the Antigravity-terminal because it won't bypass my Windows PC security/antivirus system protection.

Open a raw-terminal (search/type 'cmd' on Windows start/settings)

Find the path of our Rustmt5-chart Folder by simply → go to code-editor (Antigravity in my case) → right click → select/press 'Copy Path' (shift+alt+c)



In my case, I will get:
C:\Users\User\Desktop\VSCode\SUM3API\Rustmt5-chart

Go back to the raw-terminal and bash:
cd C:\Users\User\Desktop\VSCode\SUM3API\Rustmt5-chart (simply type 'cd' and paste)

bash
cargo clean (cleaning first if there are rust files before mine)

In my case, I have to close my Antigravity if i will run *cargo build –release*

bash
cargo build –release

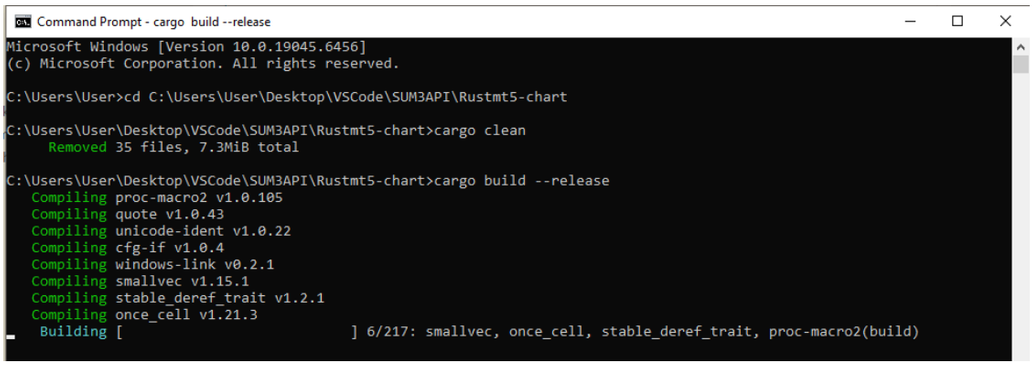
(that's a double dash '-' btw. Like - -). It will create a target folder for file storage after downloading/compiling what is written on out 'Cargo.toml' file

Summary of bash commands

[1] cd C:\Users\User\Desktop\VSCode\SUM3API\Rustmt5-chart (path directory)

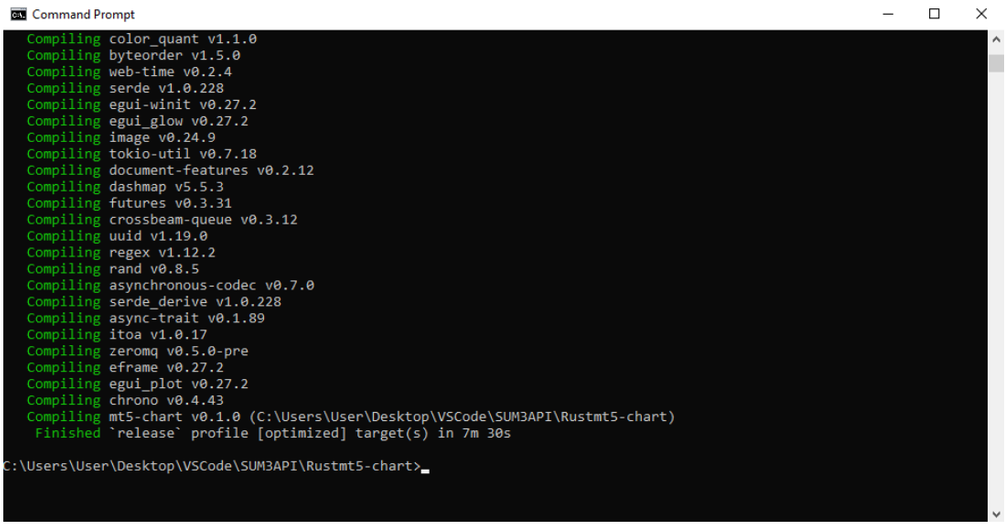
[2] cargo clean (for cleaning previous rust files)

[3] cargo build –release (download all Rust dependencies)



Wait for it to fully download; it will take time. And make sure your Code editor platform, like Antigravity, is closed.

Upon **Finished** You will see something like this: we are one bash away from opening the SUM3API software (trading terminal)



Final bash

cargo run –release (to open)

Before running, make sure you've already done this

1. MT5 platform is running
2. The MQL5 EA is running, you've attached the ZmqPublisher.mq5 on the chart. (in my case, I've attached in on XAUUSDc M3 chart). You may use any symbol chart; it doesn't matter, you don't need to change any code.
3. All of that before the bash: cargo run –release

And you'll see something like this. ENJOY!