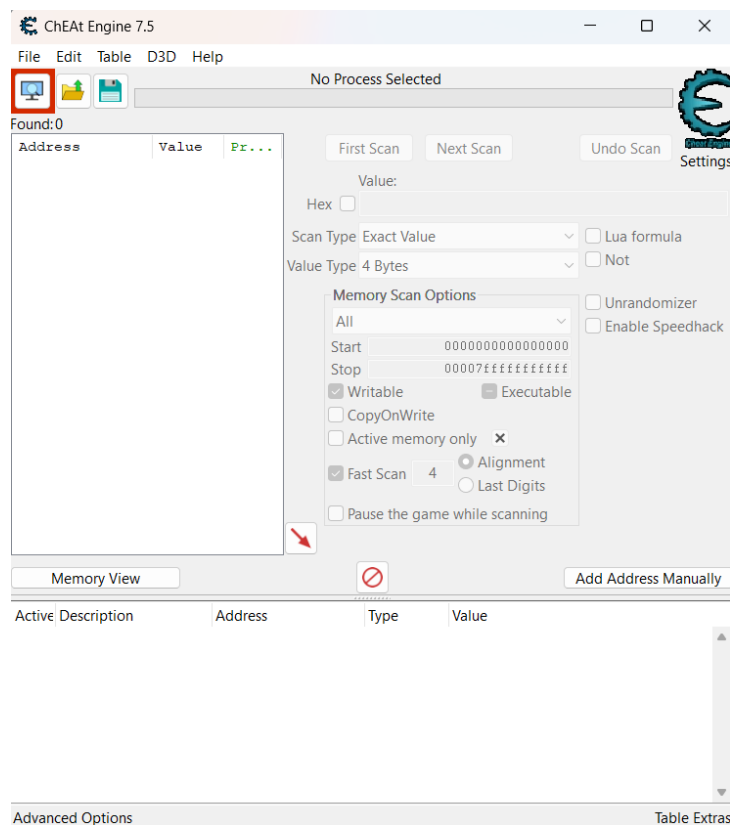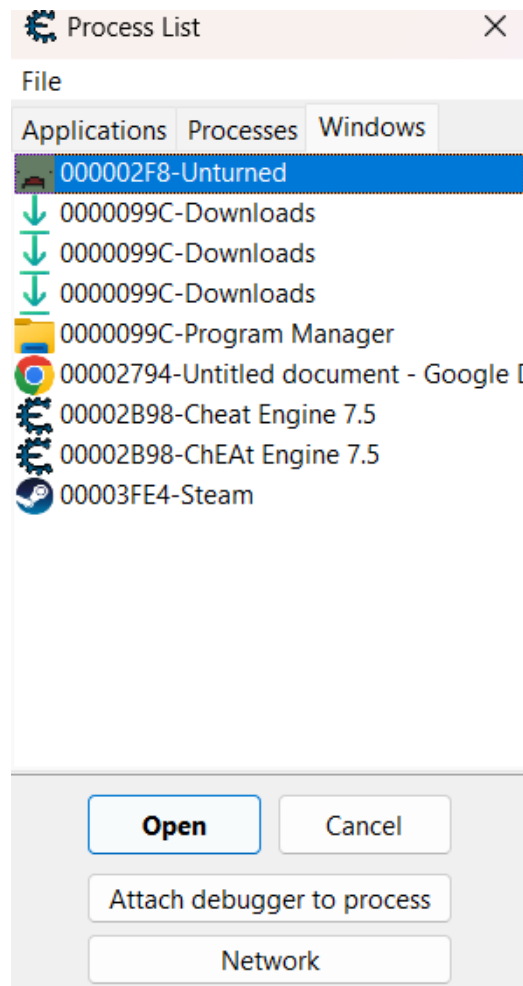# A quick guide to exact value scanning using Cheat Engine

First, click on the highlighted icon to select a process to open.

A list will then appear showing all of the currently running applications. I am going to be using Unturned for this demonstration, but you can easily use another game. Once you have selected the application, press open.

I am going to be changing how much ammo I have. As you can see, I currently have 20 bullets currently.

Now, we are going to be scanning values to find the memory address holding the amount of ammo I have. Due to the fact that I have 20 bullets currently, the value I will be searching for will be 20. I also need to make sure that I am scanning for the value type Byte, as this is the type that ammo will be stored as. Now that's been sorted, we will press 'First Scan'.
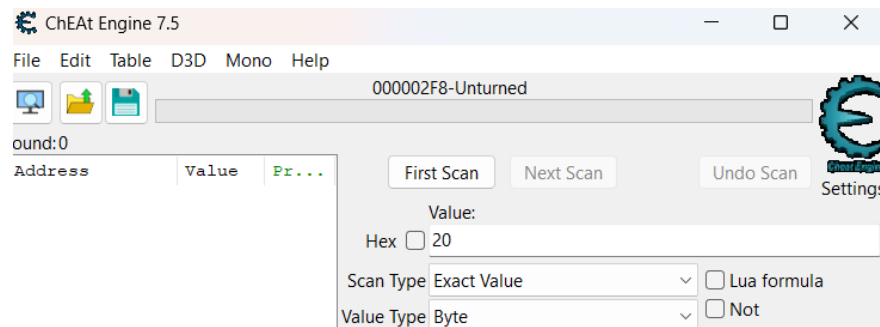
As you can see below, there are 12,471,955 memory addresses found with the value 20. Of course, we will need to reduce the number of possible memory addresses to find the one we want.
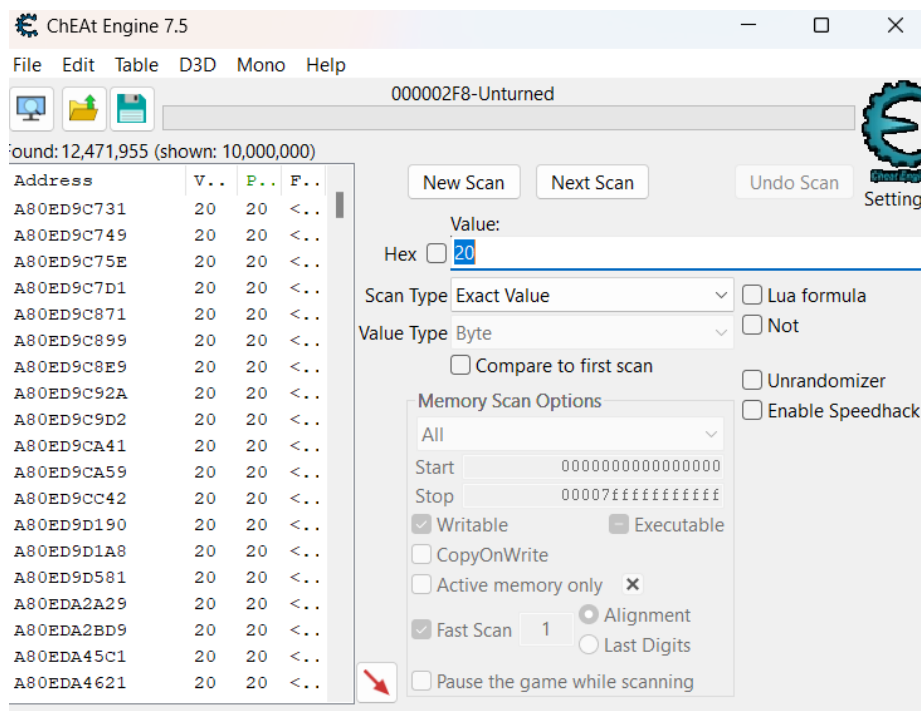

I have used up some more ammo and I am now looking for the value 18. Therefore, I will perform another scan checking to see if any of those memory addresses are now 18. Once the next value to search for has been entered, press 'Next Scan'.
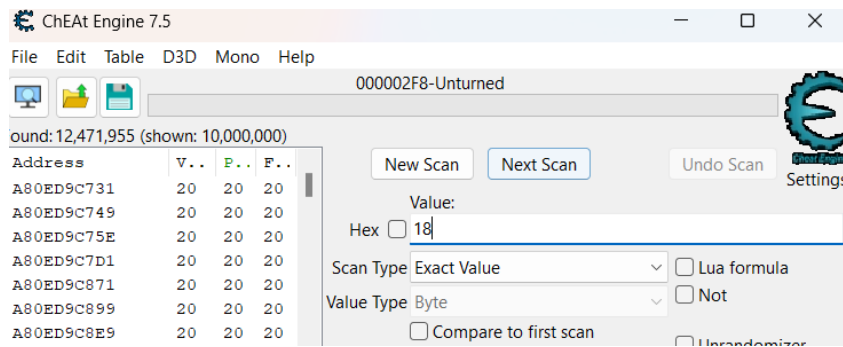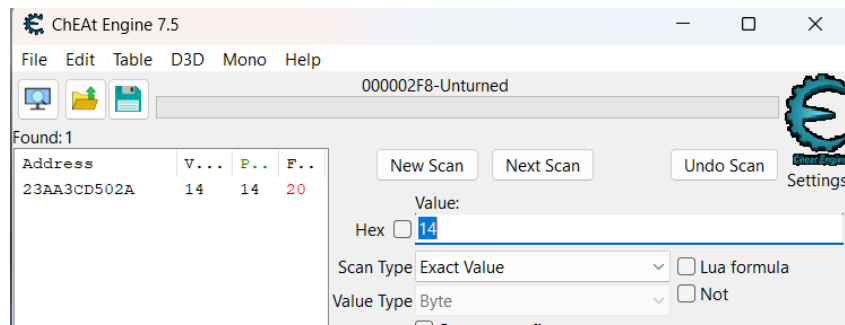
Amazing, we have now reduced the number of possible addresses to be 2700! I am now going to repeat the process a few more times to further reduce the possible addresses.
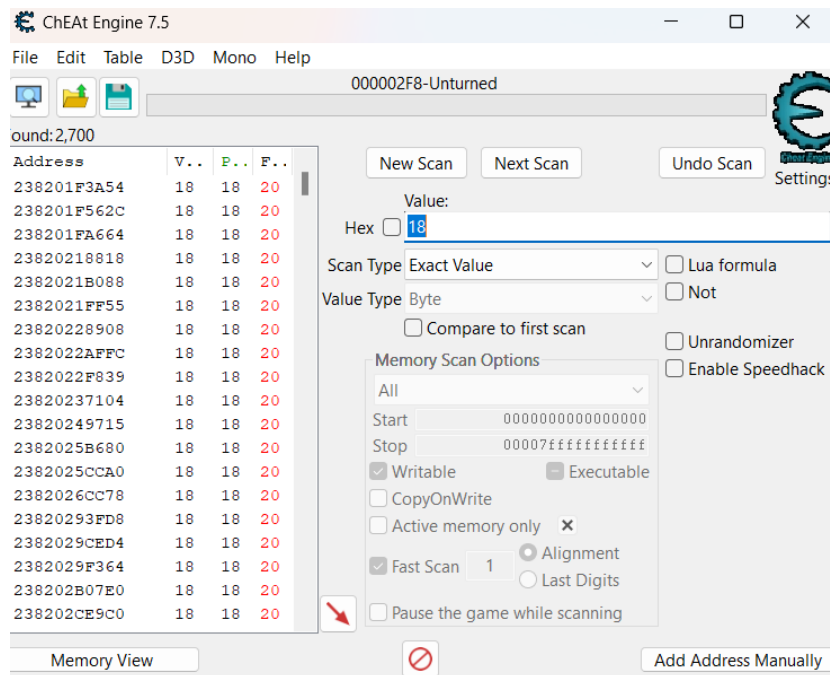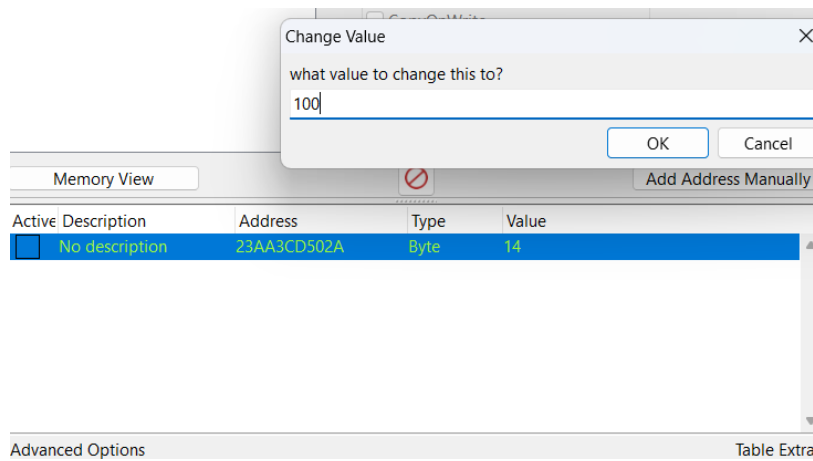

I have managed to find the most likely address.

Now, in order to change the amount of ammo I have, I need to change the value stored at this location. To do this, I will double-click on the address, and it will appear in the table at the bottom.
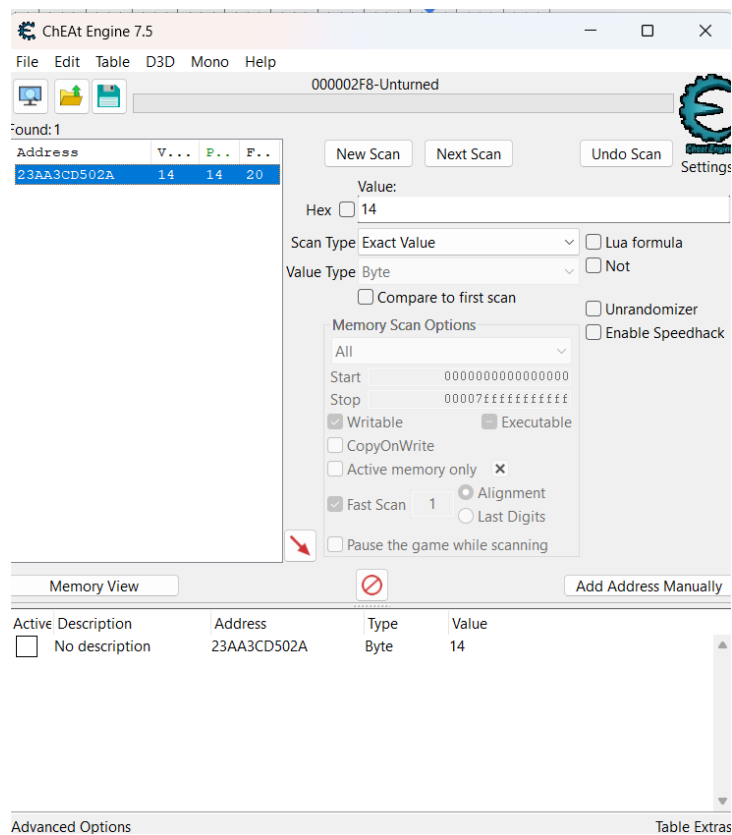
By double-clicking on the value in the table, I can alter the amount of ammo I have.
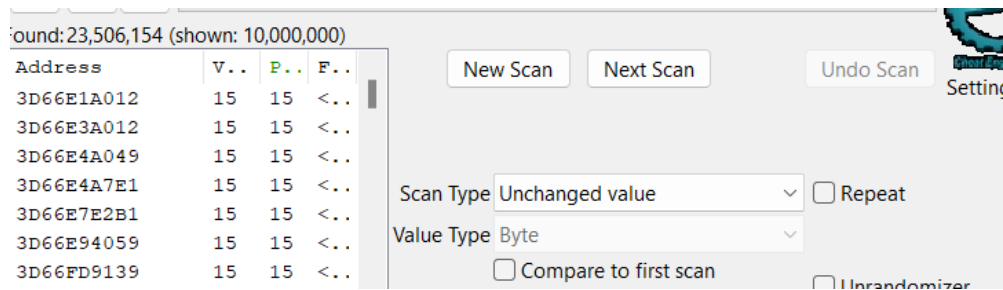
When I got back in the game, my ammo was 100. It is worth noting that sometimes you need to shoot one more time in order to see the change displayed (hence why my value says 99).
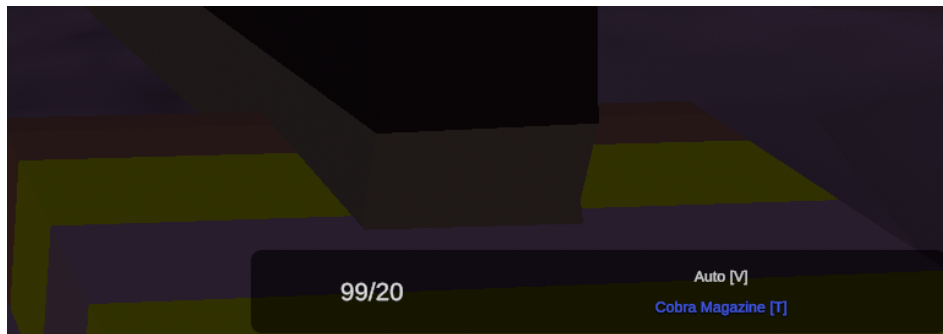
Congratulations! You have successfully changed the value stored in a memory address using Cheat Engine. Before you go, I have a few bits of information to help you further.

Firstly, sometimes you may see that some addresses are changing in real-time even when you're not doing anything. Therefore, sometimes whilst you're filtering through addresses, you can set the scan type to 'Unchanged value'. This will check to see if the value is the same as before. This allows you to comb through addresses without having to change the value as much in the game.

Found: 23,506,154 (shown: 10,000,000)

Address	V..	P..	F..
3D66E1A012	15	15	<..
3D66E3A012	15	15	<..
3D66E4A049	15	15	<..
3D66E4A7E1	15	15	<..
3D66E7E2B1	15	15	<..
3D66E94059	15	15	<..
3D66FD9139	15	15	<..

New Scan   Next Scan   Undo Scan
Settings

Scan Type Unchanged value ⌄   ☐ Repeat

Value Type Byte ⌄

☐ Compare to first scan

☐ Unrandomizer

Secondly, you can 'freeze values by toggling the Active box. Checking this box prevents it from being changed by the program. For example, if I had this checked on the ammo address, I could shoot as many times as I want and the value wouldn't decrease.

Active	Description	Address	Type	Value
☒	No description	18FD53994E3	Byte	255