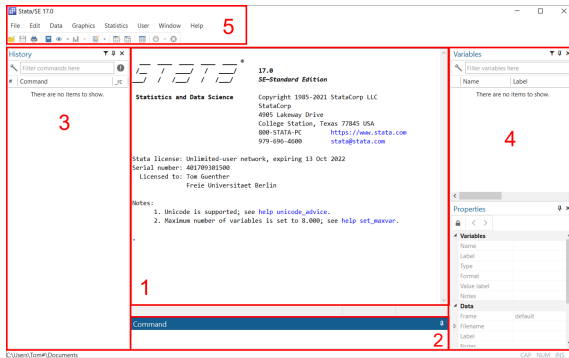


First steps in Stata

- ▶ Stata is a Software package and programming language for data management, data manipulation, statistical analysis and output presentation.
- ▶ Why use Stata?
 - easy access: Stata's command syntax is compact and consistent across commands.
 - elaborate options for data management and documentation.
 - packages for most models necessary for applied empirical research.
 - comparably efficient algorithms.

Opening Stata for the first time

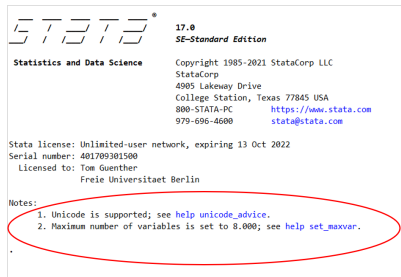
- When opening Stata you will get to see this:



- Let's take a closer look at the different parts of the **Stata interface**.

(1) Output window

- ▶ The result of every command you execute will be displayed in the **Output Window**.
- ▶ When opening Stata, the **Output Window** contains some information on the version of Stata currently in use, information on your license and the maximum amount of variables that you can currently load into Stata.
- ▶ As you can see, we can load datasets with at most 8.000 variables. We can manipulate this number - however, that will most likely not be necessary.



(2) Command Window

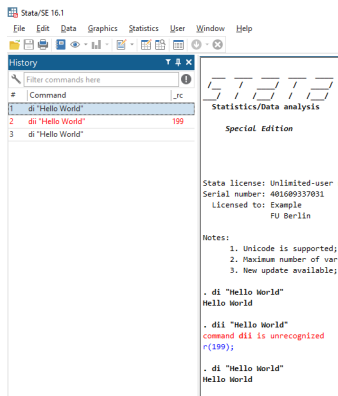
- ▶ At the bottom of the interface, you'll find the **Command Window**.
- ▶ Here, you can enter commands directly into Stata.
- ▶ To execute a command, just hit *Return*.
- ▶ Let's try it out: Stata comes with some online data sets. We will load one of them into Stata. Type the following command in the **Command Window** and press *Return*:
webuse auto, clear

You will get the coloring later.



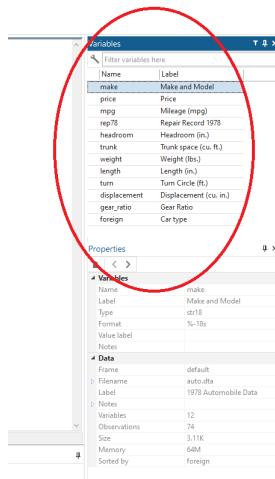
(3) History Window

- ▶ Sometimes you want to repeat the steps of your analysis. Re-typing every command would be time-intensive and frustrating. For that matter, Stata saves all of your previously issued commands in the **History Window** on the left.
- ▶ Successful commands will appear **black**.
- ▶ Unsuccessful commands will appear **red**. Such a command causes some kind of error with Stata and is not executed. What kind of error? You will get a hint in the **Output Window**.
- ▶ Double-click a command to run it again. Stata will execute it instantaneously as you can see in the **Output Window**.



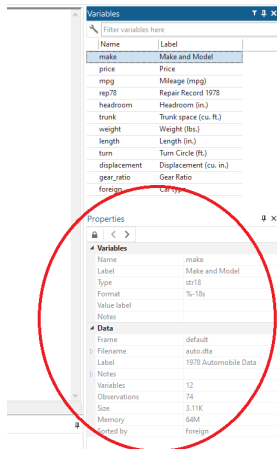
(4.1) Variables Window

- ▶ Maybe you realized that something happened in the right part of the interface.
- ▶ Once you have data loaded, variables in the data set will be listed with their labels in the order they appear in the data set.
- ! Caution: **Stata can only store one instance of the data** at a time. If you want to load new data, the currently stored data will be lost - and with it all the changes you might have done. We will see later that Stata protects you from throwing away your progress. But keep this important caveat of Stata in mind.
- ▶ Double-clicking on a variable name will cause it to appear in the **Command Window**, so you don't have to spell out its name.



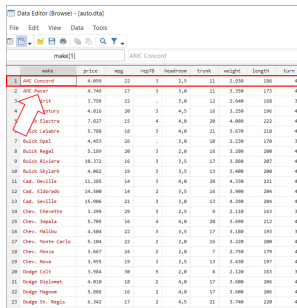
(4.2) Properties Window

- ▶ Below the list of variable names, you can find the [Properties Window](#).
- ▶ The **Variables** section lists information about the selected variable.
- ▶ The **Data** section lists information about the entire data set.
- ▶ To select a variable for display, just click on its name above.
- ▶ Let's try it out: Currently you should see the properties of the variable *make*. Select the variable *mpg* and read its **Label** in the **Variables** section to find out what it contains.



More table

- ▶ Stata stores data sets as tables. You can take a look at the stored data set by typing **browse** in the **Command Window**.
- ▶ Variables are stored as columns, rows correspond to different observations.
- ▶ Stata commands usually operate **line by line**. It executes commands that can be applied to rows of your data set.
- ▶ The command **display** executes as soon as possible. Stata can **display** the content of a variable by just looking at the first observation. So when displaying a variable, you will only get to see the variable content of the first observation.
- ▶ Attention: Re-arranging your data with the command **sort** will change the displayed output!



The screenshot shows the Stata Data Editor (Browse) window for a dataset named 'auto.dta'. The window displays a table with columns: make, price, mpg, rep78, headroom, trunk, weight, length, and turn. The first row is highlighted in red, and a red arrow points to the 'make' column.

	make	price	mpg	rep78	headroom	trunk	weight	length	turn
1	AMC Concord	4.899	22	3	2.5	11	2,950	186	40
2	AMC Pacer	4,749	17	3	3.0	11	3,350	175	40
3	Audi 5000	3,799	22	-	3.0	12	2,640	160	35
4	Audi 5000	4,816	20	3	4.5	16	3,250	195	40
5	Audi 5000	7,827	15	4	4.0	20	4,000	222	43
6	Buick LeSabre	5,700	18	3	4.0	21	3,670	210	43
7	Buick Opel	4,453	26	-	3.0	10	2,230	170	34
8	Buick Regal	5,189	20	3	2.0	16	3,200	200	42
9	Buick Wildcat	28,372	16	3	3.5	17	3,000	207	43
10	Buick Wildcat	4,002	19	3	3.5	13	3,400	200	42
11	Cad. Deville	11,385	14	3	4.0	20	4,330	221	44
12	Cad. Eldorado	14,500	14	2	3.5	16	3,900	204	43
13	Cad. Seville	15,900	21	3	3.0	13	4,200	204	45
14	Chev. Chevette	3,299	29	3	2.5	9	2,130	163	34
15	Chev. Impala	5,785	16	4	4.0	20	3,600	212	43
16	Chev. Malibu	4,504	22	3	3.5	17	3,180	193	31
17	Chev. Monte Carlo	5,184	22	2	2.0	16	3,220	200	42
18	Chev. Nova	3,467	24	2	2.0	7	2,740	179	40
19	Chev. Nova	3,953	19	3	3.5	13	3,420	197	42
20	Dodge Colt	3,904	30	5	2.0	8	2,120	163	35
21	Dodge Diplomat	4,018	18	2	4.0	17	3,000	200	40
22	Dodge Magnum	3,886	16	2	4.0	17	3,000	200	40
23	Dodge St. Regis	6,342	17	2	4.5	21	3,740	220	40

(5) Interactive toolbar

- **Toolbar** with ...

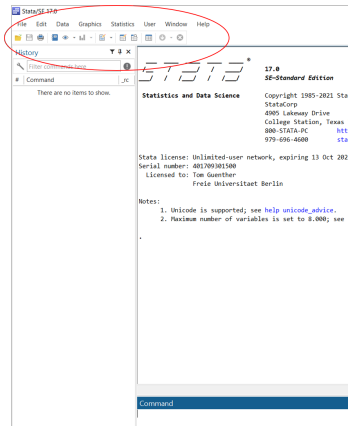
... standard features known from other programs, e.g. browsing your PC for data, saving data, and more.

... options for point-and-click operation of Stata by selecting commands from drop-down menus.

- **Everything can be done by coding!**

- Coding improves your understanding of Stata syntax and will eventually be faster anyway.

⇒ You're doing it right, if you don't use the **Toolbar**.



<https://www.stata-press.com/data/r13/u.html>