Lab 1 – Statistica basis info

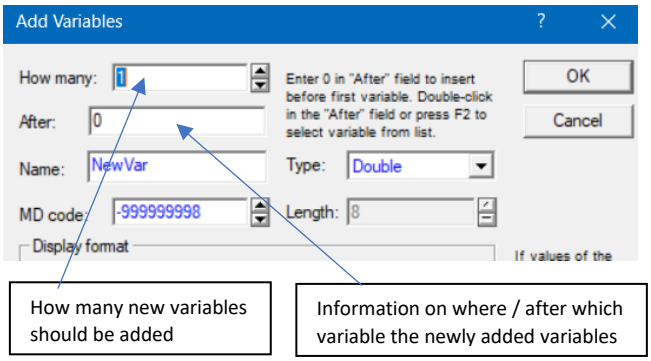
Ex 1. Basis shortcuts

Shortcut	Explanation
F9	
Ctr+R	
Ctr+A	

Ex 2. Adding/Removing/Moving Variables and Cases

Create an empty data set with 3 variables (Gender, Vehicle, County) and 5 cases, and then add two new variables: **"Daily number of km"** and **"Fuel consumption."** Add the first one at the end of the sheet, and then add the second one before the variable **"Daily number of km."** Next, add 6 new cases.

Adding a variable/a case can be done, for example, by right-clicking on the variable/case name and then selecting "Add variables/Cases" from the menu.

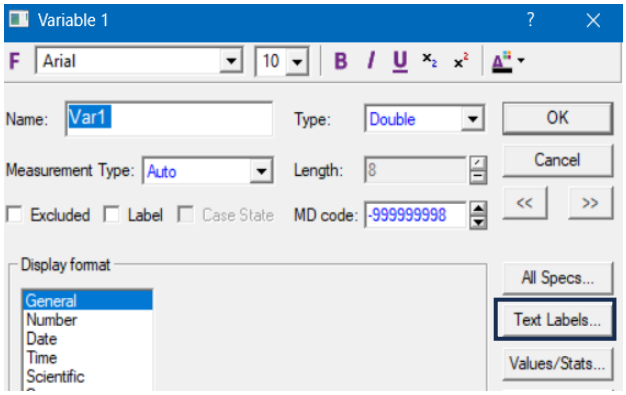


Ex 3. Creating a data file

From the given table, create a data file in Statistics – save the file as **auta.sta** – it will be needed for the classes

When entering values for the variables: *Gender*, *Vehicle Brand*, and *County*, use the variable coding option: after double-clicking the variable name, in the edit window on the right select **Text Labels**, then assign a text value to the label, e.g. "F", and in the **Numeric** field assign a numerical value, e.g. 1.

Ultimately, you should obtain a data set as shown in Table 1.



Lp	Gender	Vehicle	County	Fuel consumption	Daily number of km
1	F	Opel	Rzeszowski	7,2	120
2	M	Fiat	Mielecki	6,6	220
3	M	Seat	Rzeszowski	8,2	72
4	M	Opel	Rzeszowski	8,4	98
5	F	Opel	Mielecki	7,3	120
6	M	Fiat	Mielecki	7,7	180
7	F	Fiat	Mielecki	7,3	140
8	M	Seat	Rzeszowski	8,8	65
9	F	Seat	Rzeszowski	8,9	50
10	M	Opel	Mielecki	7,4	120
11	M	Fiat	Mielecki	7,1	160
Code	*F-1* *M-2*	*Opel-1* *Fiat-2* *Seat-3*	*Rzeszowski -1* *Mielecki -2*		

Table 1. Austa.sta

Ex 3. Formulas in Statistica (differences to Excel)

Using the **auta.sta** file, create a new variable "**fuel used"** and, using the fuel consumption formula in the form:

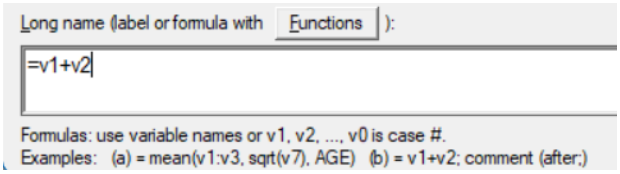
fuel consumption = (fuel used / Daily number of km) × 100,

calculate how much fuel each car used.

Entering formulas is done differently than in Excel, as it is performed through variable editing. In the **"Long name or formula"** field, this can also be done, for example, by selecting from the toolbar: **Data → All specifications → Long name (label or formula).**

Rule: formulas begin with the "=" sign, followed by a reference to the desired variable using the prefix "V" and the appropriate variable number.

For example, if I want to add variables 1 and 2, the formula is:
=V1+V2



Ex 4. Sorting and selecting cases

Using the sorting options (**Data → Sort** or right-click on the variable name → **Sort**), answer the question:
Which car, and from which county, had the highest fuel consumption (…….), and which had the lowest (…….)?

Using the **"Select Cases"** option and descriptive statistics, answer the following questions:
What was the average daily number of kilometers driven in Rzeszów County? …….

What was the total average fuel consumption for Fiat and Seat? ……..

The **"celect cases"** option is available in almost every window in Statistica, most often on the right-hand side of the opened editing window. It may have different names, such as **"Select Cases"** or **"Sel Cond."**

The condition is written similarly to entering a function, with the difference that you do **not** begin with the "=" sign.

Within selection conditions, you can use mathematical operators such as:
"=", "+", "-", ">", "<", ">=", "<="

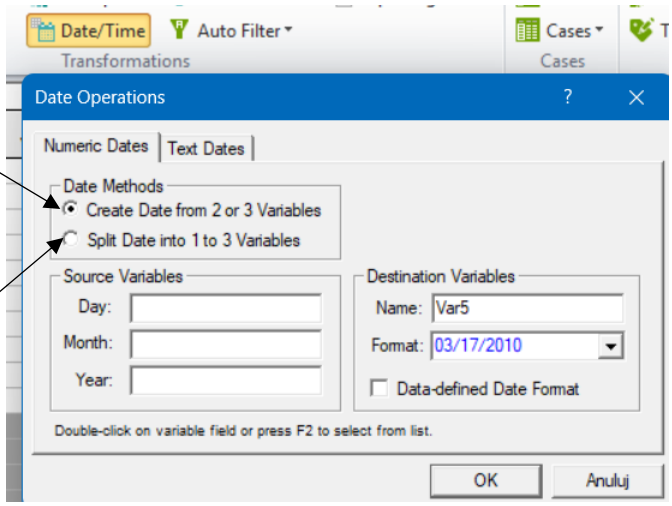
as well as logical operators such as:
"or", "and".

Pay attention to the difference between **"enable selection conditions"** and **"disable selection conditions"**!

Ex 5. Operations on data variable

1. **Creating a date from variables (file: bezrobocie.sta)**

   a. Add a new variable **"Date"** after the variable **"Month."**
   b. From the toolbar, choose **Data → Date and Time → Create date from 2 or 3 variables.**
   c. In the **Month** field, select the variable or variable number in which the month information is coded. In the **Year** field, select the variable or variable number in which the year information is coded. In the **Target Variables** section, indicate the name/number of the variable in which the date is to be created.
   d. In the **Format** field, choose the appropriate display format for the newly created date, suitable for its components.



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2. **Splitting a date (file: Wypadki w Polsce od 1998 roku (M).sta)**

   a. Add 2 new variables after the variable **"Date."** Name them **"Month"** and **"Year"** respectively.
   b. From the toolbar, choose **Data → Date and Time → Split date into 2 or 3 variables.**
   c. In the **Month** field, select the variable or variable number where the month information is to be coded. In the **Year** field, select the variable or variable number where the year information is to be coded. In the **Source Variable** section, indicate the name/number of the variable in which the date is currently stored.