

## Introduction to the SAS System

### Lab 13

- 13.1 Write a macro that will replace (in a given data set having only numerical variables )  $n$  randomly picked elements with the missing values.
- 13.2 Write a macro with the two parameters *numofvars* and *numofgrps* that will create a random data set with the variables  $v_1-v_{numofvars}$  with the values in the set  $A=\{A_1, A_2, \dots, A_{numofgrps}\}$ . The set  $A$  should be a subset to the set of value for every variable. Furthermore, the values of every variable should be ordered in the invcreasing order, like in the set **Gen.3\_6** which can serve as an example .
- 13.3 How to check whether there exists a global macrovariable with a given name?
- 13.4 Write a macro that will find the maximum of all numerical variables from all data sets from a given library.
- 13.5 Write a macro that will remove from a given data set all variables with the names ending with a given letter.
- 13.6 Write a macro with the two parameters *lib* and *dir* that will export (as text files) all SAS data sets from the library *lib* into the directory *dir*. The names of the text files (with the extension *txt*) should be identical with the names of the relevant data sets. (Hint: one might to use `PROC EXPORT`.)
- 13.7 Write a macro *%howmany(lib,group,val)* that will find all data sets from the library *lib* that contain the pair of numerical variables *group* and *val*, and will write to the Log window the value (or values) of the variable *group* that is associated with the largest number of distinct values of the variable *val* in the found sets. (We assume that in there can exist some data sets in the library *lib* without the given pair of variables *group* and *val*.)
- 13.8 Assume that some library has only the sets that contain at least one common variable (they can also have some non-common variables). Write a macro (with the name of the library being the only parameter of the macro) that sorts all the sets from the library with respect to the key consisting of all the common variables (i.e. variables that occur in all sets). The variables in the key should appear in the alphabetical order.
- 13.9 Write a macro with the parameter *lib* that creates a data set in which the names of variables are the names of all the variables that occur in data sets from the library *lib*. The values of the variables should be the names of the data sets in which the variables occur.