SAS TRANING SCHEDULE

Part 1:

SAS Statistical Analysis System.

Includes:

SAS/BASE (the SAS language and general purpose procedures);

SAS/STAT (statistical procedures e.g. PROC REG for linear regression);

SAS/ETS (econometrics and time series procedures PROC MODEL)

SAS/GRAPH (for graph)

SAS/IML (matrix based language/MLE estimation)

1) SAS windows, working interfaces, log, editor, output etc.

SAS data format:

Rows=observations

Columns=variables

2) SAS sytax:

Data step + Proc step

statement must end with ";"

SAS does not differentiate upper/lower cases letters, except for character variables (e.g. edu = ‘low’; edu = ‘LOW’).

Some keywords would start the program:

DATA, SET, INFILE, LOG, LAG, MIN, MAX, MEAN, PROC MEANS etc.

User defined names for variables, datasets, arrays, or libraries

i) Can be up to 8 characters in length
ii) First character must be a letter (A to Z) or underscore (_)
iii) Blanks cannot appear in SAS names
iv) Names of special SAS automatic variables as _N_ cannot be used as variable names.

SAS expressions:

Operators such as log(x+y)-100*x

Arithmetic operators: ** * / + -

Comparison operators: = ^= > >= <=

Logical Operators: & | ^

Example: “IF gender=’m’ THEN male=1; ELSE male=0;”

SAS functions:

ABS()

MAX(argument1, argument2, ...)

MIN()

SQRT()

SIGN()

EXP()

LOG()

LOG2()

SUM(OF)

SAS comment takes the forms of

*this is the comment;

/*this is also a comment*/

PART 2:

Working with data.

Example 1:

generating a data set within SAS.

Anna female 23 university 130

Thomas male 33 university 150

Sarah female 43 high-school 128

Maria female 35 high-school 129

Karin female 29 university 151

AnnaM female 43 university 133

Lars male 33 university 133

Sara female 55 high-school 123

Mona female 19 high-school 139

Hans male 19 high-school 132

Save example1 as a SAS permanent data file;

Example 2:

Read in an external txt file into SAS and save it as a SAS file or an excel file or a txt. File.

Example3:

Read external excel file into SAS and save it as a SAS file or other formatted files.

SUB-SETTING data files:

subsetting the data using example1.sas

MERGING data files:

merge data sets.sas

WORKING WITH CENSUS DATA CAN2000

1)

Proc contents to see the CENSUS 2000.

2)

Select part of the variables (label)

3)

Generate a sub-sample of ONTARIO and QUEBEC and BRITISH COLUMBIA

4)

PROC MEANS

5)

PROC FREQ

6)

PROC UNIVARIATE

7)

WAGE REGRESSION FOR ONTARIO AND QUEBEC