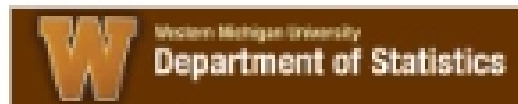


SAS Basic Concepts #1

The language, log, output, SAS data set and others

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Language Elements

- ▶ Consists of statements
- ▶ Statements usually start with keywords (egs: DATA, PROC, INPUT, KEEP, IF, DO, ...)
- ▶ Each statement ends with a semicolon (;)
- ▶ Words in statements are case insensitive, except for most situations when texts are enclosed in matching quotation marks, single quotes (') or double quotes (")



Program Layout

SAS statements are in free format,

- ▶ they can begin/end anywhere on a line
- ▶ a statement can continue over several lines
- ▶ several statements can be on a line (avoid this)



Basic Building Blocks of a SAS Program

There are two basic building blocks:

- ▶ Data steps: read raw data, create/modify data, set/change data value, combine/merge/update data sets
- ▶ Proc steps: pre-written procedures that perform various tasks

Note: In addition to above, there are stand-alone statements such as `OPTIONS`, `TITLE`, `FOOTNOTE`, `LIBNAME`, `FILENAME`, ...



Step Boundaries

- ▶ DATA & PROC statements signal the beginning of a new step
- ▶ Subsequent DATA or PROC statements, RUN statements (for DATA steps and most PROC steps) or a QUIT statement (for interactive PROC steps such as PROC DATASETS, PROC GLM, PROC REG, PROC SQL, PROC IML) signal the end of a step
- ▶ Upon encountering new step, SAS stops reading statements and executes the previous step



SAS Log

upon submitting a program, SAS generates a log of processing activities

SAS Log Example

See eg01.sas (run 001.sas first, note that the SAS data path need to be specified accordingly)

