Using SAS to Simplify Your Life

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2011 NCAIR Conference
Boone, NC
April 4-6, 2011

The Problem

- Survey results by course/instructor
- Distribute electronically
- How to speed up the process
  - Automatically rename files to course/instructor
  - From hours to seconds…
- Examples:
  - Study Abroad surveys ~ 25 courses/instructors
  - Elon 101 surveys ~ 100 courses/instructors

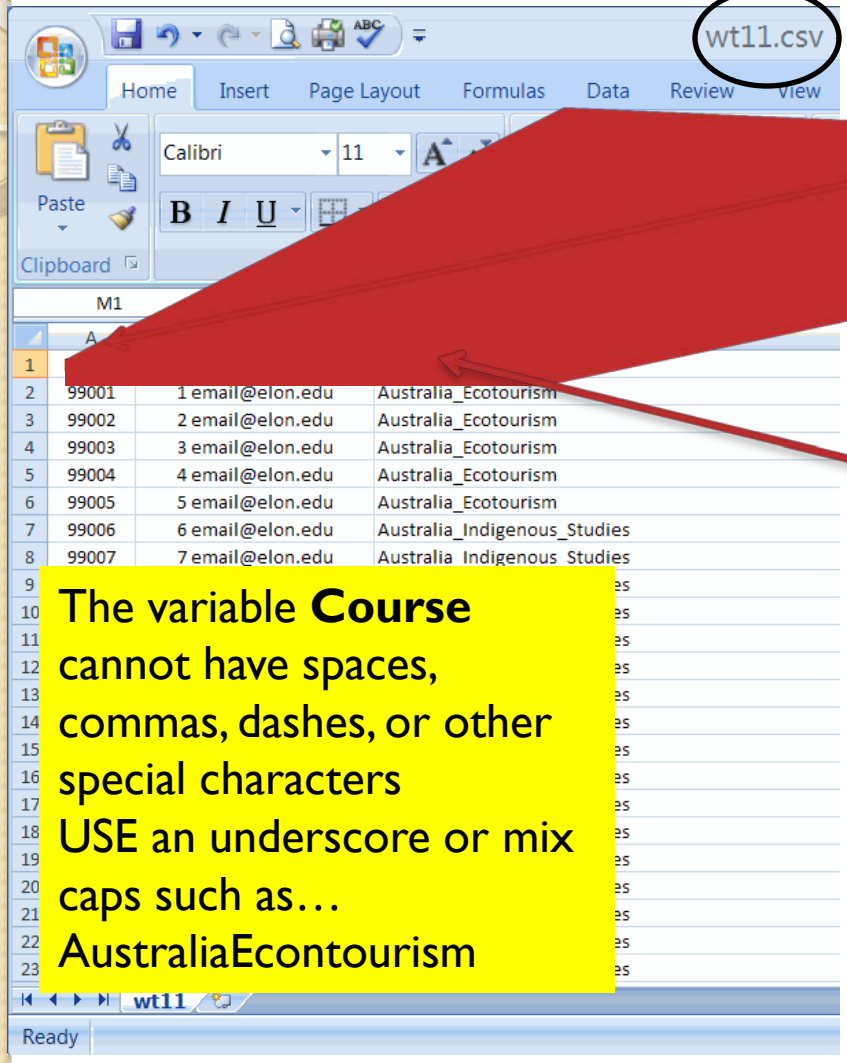
Software

- Inquisite - web based survey package
  - Email system
  - Basic reporting
- SAS
  - Statistics
  - Data manipulation
  - Reporting
  - Blah-blah-blah

Inquisite

- Survey package
  - Create the survey
  - Embed a key
  - Email list that contains some important information to allow this to work

CSV-file



2	99001	1 email@elon.edu	Australia_Ecotourism
3	99002	2 email@elon.edu	Australia_Ecotourism
4	99003	3 email@elon.edu	Australia_Ecotourism
5	99004	4 email@elon.edu	Australia_Ecotourism
6	99005	5 email@elon.edu	Australia_Ecotourism
7	99006	6 email@elon.edu	Australia_Indigenous_Studies
8	99007	7 email@elon.edu	Australia_Indigenous_Studies

The variable **Course** cannot have spaces, commas, dashes, or other special characters
USE an underscore or mix caps such as…
AustraliaEcontourism

SAS-code

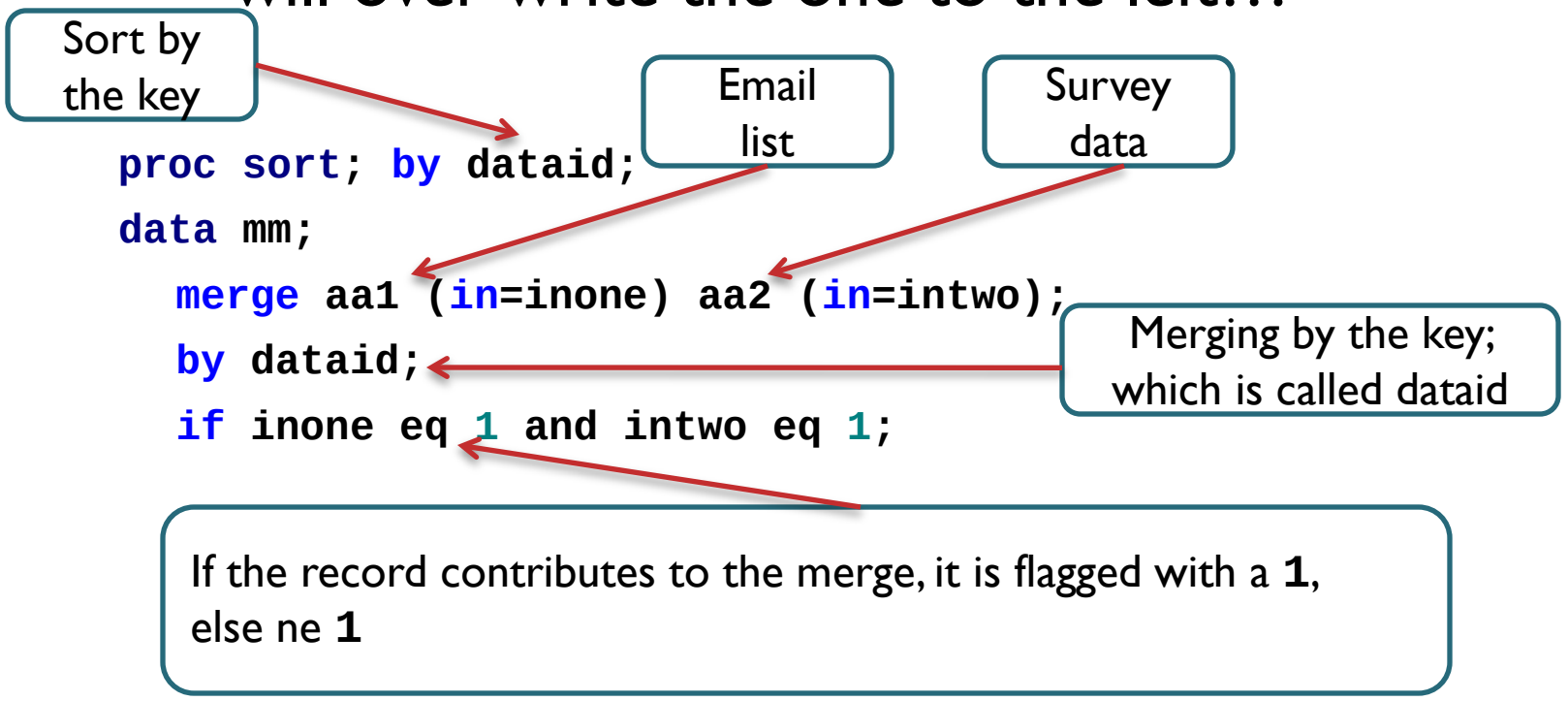
```
26 data aa1;
27 infile 'c:\sas\elon\sa\wt11.csv' DLM=',' DSD r
28 input
          DataID  :   9.
          mail    : $ 30.
          ourse   : $ 50.

          ; by dataid;

35 data aa2;
36 infile 'c:\sas\elon\sa\winter1102-ordinals.csv
37 input
38          D1   : $  2.0
39          D2   : $  2.0
40          D3   : $  2.0
41          courseX : $ 50.
42          Q1   : $  1.0
43          Q2   : $  1.0
44          Q3   : $  1.0
45          Q4   : $  1.0
46          DataID :   9.
47          Q6   : $  4050.
48          Q7   : $  1.0
49          Q8   : $  1.0
50          Q9   : $  1.0
51          Q10  : $  4050.
52          Q11  : $  1.0
53          Q12  : $  1.0
54          Q13  : $  1.0
55          Q14  : $  4050.
56          Q15  : $  1.0
57          Q16  : $  1.0
```

Merging Files in SAS

- When merging files in SAS
  - same named variables will over write data
  - The file to the right in the merge statement will over write the one to the left…



SAS: ODS – Creating New Files

```
data a1; set mm;
ods listing close;
ods noresults;
ods rtf file="C:\sas\elon\sa\test2011\output100.rtf"
/* output files are sequentially number: output100.rtf, output101.rtf, output102.rtf,...  */
/* this code is arranged to handle up to 100 files  */
/* files are created by the BYGROUP variable (COURSE) and there will be as many files as unique COURSEs */
      style=minimal
      newfile=bygroup;

proc tabulate missing;
by course;
format
/*this area is formatting the response selection - see top of program for coding */
      q1 q2 q3 q4 q7 q8 q9 q11 q12 q13 q15 q16 q18 q19 q20 q21 q22 q23 q24 q25 q27 q28 q29 q30
      q32 q33 q34 $qA.
      q36 q37 q38 q39 q40 $OtherA.;

class q1 q2 q3 q4 q7 q8 q9 q11 q12 q13 q15 q16 q18 q19 q20 q21 q22 q23 q24 q25
        q27 q28 q29 q30 q32 q33 q34 q36 q37 q38 q39 q40
      /style={background=white font_size=10 font_style=italic foreground=black font_weight=bold font_face=times_roman};
label
Q1     =     'Elon Services: Program promotion/advertising'
```

Set-By; If first.xx or last.xx

```
data course;
/* Creating a new data set call COURSE*/
/* (keep=course) Keeping just one variable
/* (set; by XX; if first.XX)
        keeping one record per variable */
set a1 (keep=course);
by course;
if first.course;
proc print;
run;
```

Set-By results

You've seen the wt11.csv file. It's similar to a roster, but it has 25 course rosters. While student IDs are unique, course titles are not.

This is what the set-by results in:

```
First.Germany
     .Germany
     .Germany
 Last.Germany
First.France
     .France
 Last.France
First.China
First.Poland
     .Poland
     .Poland
     .Poland
 Last.Poland
```

Creating a Clean External File

```
Filename ABC pipe 'dir /B "C:\saa\elon\sa\test2011\"';
/* PIPE allows one program's output to be used as another's input          */
/* B=bare directory - only file names appear                              */
/* taking the file names from directory TEST2011 and moving those to File ABC*/
/* files in ABC are named output1.rtf, output2.rtf,...                    */
Data files ;
infile ABC truncover; /* TRUNCOVER forces the program to stop reading records that are short  */
input from $100. ;    /* THUS, it stops trying to find more data for that record            */
                      /* FROM is my variable name for the file names in ABC */
run;
```

DOS

- Start <>
  - Run <>
    - CMD <> (command line)
      - dir <>
      - dir /b <>
- Example

Preparing & Renaming Files

```
options noxwait;     /* NOXWAIT allows the system to speed through automatic RETURNs            */
Data zzz ;           /* THUS, it saves you key strokes - at least one keystroke for each file    */
set files ;          /* SO, if you 100 files, you'll save yourself 100 keystrokes                */
set course ;
course1 = cats(course, "_FIGURES.rtf");
/* COURSE1 is composed of the variable COURSE plus _FIGURES.rtf */
/* CATS removes any unwanted spaces                             */
/* All of these file names will end with a  _FIGURES.rtf        */

call system ("cd C:\sas\elon\sa\test2011\") ;
/* calling up the TEST2011 directory  */
call system (catx(' ', "Rename", From, course1));
/* CATX Removes leading & trailing blanks, inserts delimiters, & returns a concatenated character string*/
/* Renaming the files in that directory to COURSE1  */
/* Think of this as a one-to-one match - thus, sorting is important*/

run;
```

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EOF