SAS Overview

The Interface

- Editor Window
- Log Window
- Results Window
- Explorer Window
- Output Window

The Language

- **Data** step – define the data set
- **Proc** step – says what procedure to use
- Localized statements and options
- Global statements and options

Steps of a Program

- Start with a **data** or **proc** step
- End at the next **data**, **proc** or **run** statement
- Give names to data sets and variables in the data set
- Submit the program via **Run** menu or tool bar icons to run the program and generate results

Output Delivery System (ODS)

- Determines format for outputs (e.g. html, rtf, listing)
- Can be used to control which graphics and tables are generated
- Can be used to control styles

Changes from 9.2 to 9.3

- The default for the Output Delivery System is to generate results in **html**.

- Graphics are turned on by default (so

  ods graphics on;

  is not needed)

The Data Step

It will include:

- a name for the data set
- names and types for the input variables
- a data source
- and any additional processing code

Data Sources

Data sources we will consider:

- raw data entered manually
- a data file
- an existing SAS data set

Data Step Examples

- **bodyfat** data set defined manually
- **slimmingclub** data read in as **list** input
- **slimmingclub2** data set read in as **column** input and using **informats**
- addition of a variable to the **slimmingclub** data set
- creating a new data set from the existing **bodyfat** data set

The Proc Step

Base syntax:

proc *procname* data=*datasetname*;

run;

Additional Statements

Add a statement:

proc *procname* data=*datasetname*;

***statementname* <*variables*>;**

run;

Add More Statements…

Include more statements:

proc *procname* data=*datasetname*;

***statementname1* <*variables1*>;**

***statementname2* <*variables2*>;**

…

run;

Add Options

Add options to statements:

proc *procname* data=*datasetname* <*procopts*>;

***statementname1* <*variables1*> </ *s1options*>;**

***statementname2* <*variables2*> </ *s2options*>;**

…

run;

A Few Common Statements

- **var** –variables to be used in the procedure
- **class** –classification variables
- **where** –subsetting data
- **by** –operation based on a variable

Examples

- Using **var** and **where** in **proc print**
- Sorting data **by** team and obtaining basic descriptive stats **by** team
- Adding an option to a scatter plot to plot groups individually
- Adding a linear regression line to the plot

Proc Results in Separate html Files

Global code we can use:

```
ods html close;
ods preferences;
ods html newfile=proc;
```

Writing to an rtf File

General form:

ods rtf file=‘*filename.rtf*’;

<*code to generate results for report*>

ods rtf close;

The Help System

- Example: **proc reg**
- Example: **proc sgplot**