```
libname user '\\CRMPSAS3\Data231\WC-Boca\DC\SAS\Sample Data\user';
```

(1) DATA ENTRY

```
*** IMPORTING & EXPORTING;

        * Data Infile;

                data teams;
                    infile '\\CRMPSAS3\Data231\WC-Boca\DC\SAS\Sample
Data\import\teams.txt' dlm='09'x firstobs=2 obs=54 dsd truncover;
                    input draft_date :mmddyy8. draft_time :time. team $ position :$2.
name :$3. B2008 B2009 B2010 B2011 B2012 R2008 R2009 R2010 R2011 R2012;
                    format draft_date mmddyy8. draft_time time. B2008 B2009 B2010
B2011 B2012 6.2 R2008 R2009 R2010 R2011 R2012 6.4;

            * Error Detection;

                    if _error_=1 then output <dataset_bad>;
                    else output <dataset_good>;

            * Multiple-to-Single;

                    input #1 <var1> <informat> #2 <var2> <informat> #4 <var4>
<informat>;

                    input <var1> <informat> / <var2> <informat> / / <var4> <informat>;

                    input <var1> <informat>;
                    input <var2> <informat>;
                    input;
                    input <var4> <informat>;

            * Single-to-Single;

                    input <var1> <informat> <var2> <informat> @<location> <var4>
<informat>;

                    input <var1> <informat> <var2> <informat> +<shift> <var4>
<informat>;

                    input <var1> <informat> @;
                    input <var2> <informat> @;
                    input @/+/-<location/shift> <var4> <informat>;

            * Single-to-Multiple;

                    input <var1> <informat> <var2> <informat> <var3> <informat> @@;

        * Proc Import;

                proc import datafile='\\CRMPSAS3\Data231\WC-Boca\DC\SAS\Sample
Data\import\teams.xlsx' out=teams dbms=xlsx replace;
                    range='data set$A1:O54'n;
                    getnames=yes;
                    mixed=no;
                    scantext=no;

        * Proc Export;

                proc export data=teams outfile='\\CRMPSAS3\Data231\WC-
Boca\DC\SAS\Sample Data\export\teams.xlsx' dbms=xlsx replace;
```

```
*** DATA STEP & PROC STEP;

        * Data Step;

                data <dataset2> (drop= ... keep= ... rename= ... where=(...));
                    set <dataset1> (drop= ... keep= ... rename= ... where=(...)
firstobs=<n> obs=<n+m>);
                    length <var1> ...;
                    ...;
                    if ...;
                    label <var1> '<label1>' <var2> '<label2>' ...;
                    format <var1> ...;

            * Concatenate;

                data <dataset>;
                    set <dataset1> <dataset2>;

            * Interleave;

                data <dataset>;
                    set <dataset1> <dataset2>;
                    by <key1> ...;

            * Proc Append;

                proc append base=<dataset1> data=<dataset2> force;

        * Proc Sort;

                proc sort data=<dataset1> out=<dataset2> <nodupkey or noduprec>
equals;
                    by descending <var1> <var2>;

        * Reordering;

                data <dataset>;
                    retain <var1> <var2> ...;
                    set <dataset>;

*** EXPRESSION OPERATORS;

        * Logical Operators;

                    & (and);
                    | (or);
                    ^ ~ (not);

        * Comparator Operators;

                    ~= ^= (ne);
                    ? (contains);
                    =: (starts with);
                    in (in);

        * Like Operator;

                    % (any number of characters);
                    _ (one character);
                    where <var1> like 'a/_b' escape '/';
```