

CSC433 Project 5a
Sarah Cummings

***Project 5a Sarah Cummings**

* Uncomment the following link to generate comments in the log file on how the macro lines are expanded. This line may or may not be useful;
options mprint;

*line below defines a sas macro with parameters. Note correct use of %, name is create_datasets, and num_states is a variable we define when invoking macro;
%MACRO create_datasets(num_states=);

*libname location needed quotes;
*this creates a library for us to keep all 50 state dataset;

libname states '/folders/myfolders/';

*line below needed % before TO;
*the following block of code will run of all 50 of our state files, so long as we put 50 as our parameter when we invoke the macro;
%DO k = 1 %TO &num_states;
 data state_data;

*line below needed quotes rather than appostrophes for the infile, and needed two periods after the k so we could pass variable;
*It reads in data from the state files and stores as variables;

infile "/folders/myfolders/433files/states-files/state&k..txt" dlm='';
length state \$ 20;
length city \$ 20;
input state \$;
*function below is supposed to be tranwrd not transwrd;
dsname = tranwrd(trim(state), ' ', '_');
*the call symput lines below assign a string to a corresponding variable we have previously defined;
call symput("name", state);
call symput("dsname", dsname);

*the chunk of code below will write the data to our dataset from the appropriate text file;
do i = 1 to 50;
 input rank city \$ popul;
 output;
end;

*I changed the line below to keep city popul since we want the cities and populations to be part of the output;
keep city popul;

```
run;
```

```
*the code below creates datasets in our library for each state;  
data states.&name;
```

```
    set state_data;
```

```
run;
```

```
*the code below prints a table for each state;
```

```
proc print data=states.&dsname;
```

```
    title "Ten Largest Cities in &name";
```

```
run;
```

```
end;
```

```
%END;
```

```
*the mend statement below was missing;
```

```
%MEND create_datasets;
```

```
run;
```

```
*line below invokes macro with parameter-- needs % but no semicolon;
```

```
*parameter is num_states not numstates;
```

```
%create_datasets(num_states=50)
```

```
run;
```

Sample of my output:

Ten Largest Cities in Alabama

Obs	city	popul
1	Birmingham	242820
2	Montgomery	201568
3	Mobile	198915
4	Huntsville	158216
5	Tuscaloosa	77906
6	Hoover	62742
7	Dothan	57737
8	Decatur	53929
9	Auburn	42987
10	Gadsden	38978

Ten Largest Cities in Alaska

Obs	city	popul
1	Anchorage	260283
2	Juneau	30711
3	Fairbanks	30224
4	Sitka	8835
5	Ketchikan	7922
6	Kenai	6942
7	Kodiak	6334
8	Bethel	5471
9	Wasilla	5469
10	Barrow	4581