**Assignment #6**

**Stats 157 Winter 2018**

Sarah Ruckman

SID: 7194

Suppose you are a veterinarian and have been asked to participate in a national project concerning dogs and the presence/absence of microchips and spaying and neutering. Suppose data has been entered in hundreds of Excel files such as the two Excel files being used in this assignment.

1. Write a SAS macro (or modify an existing macro) called indata1 to read in and print out the data in each of the Excel files. (Done as part of Assignment #5)

**SAS Code:**

/\*Set up format for the output\*/

options ls = **78** ps = **55** nodate nonumber nocenter mtrace mlogic mprint;

ods graphics off;

/\*

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macro heading1 macro to generate titles

Parameters

what parameter to identify what object

number1 number of the object

quarter1 quarter and year

filenum which data file (1 or 2)

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\*/

**%macro** heading1(what,number1,quarter1);

title1 "Statistics 157 &quarter1";

title2 "&what &number1";

title3 "Sarah Ruckman";

%\*Close the macro;

**%mend** heading1;

/\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

macro importing

USAGE: to read in Excel files

Variables:

start sheet number to start

stop sheet number to stop

name1 base name of the worksheets

name2 name to add on for new SAS dataset

filename name and path to Excel file to be read in

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**%macro** indata1(start,stop,name1,name2,filename);

%\*Setup macro do loop to read in series of worksheets;

%do i = &start %to &stop;

%\* Use proc import to import the excel file;

PROC IMPORT OUT = WORK.&name1&i

DATAFILE= "&filename&i..xls"

DBMS=xls REPLACE;

SHEET="&name1&i";

GETNAMES=YES;

%\*Create new SAS temporary dataset;

data &name1&i&name2;

%\* Format %heading1(what,number1,quarter1,&i);

%***heading1***(Assignment,**6**,Winter **2018**);

%\*Use set command to get information from output file;

set &name1&i;

%\*Print the data as check;

proc print noobs;

%\*Close the marco do loop;

%end;

%\*Close the macro;

**%mend** indata1;

/\*Execute the macro

Format %indata1(start,stop,name1,name2,filename\_including\_path)

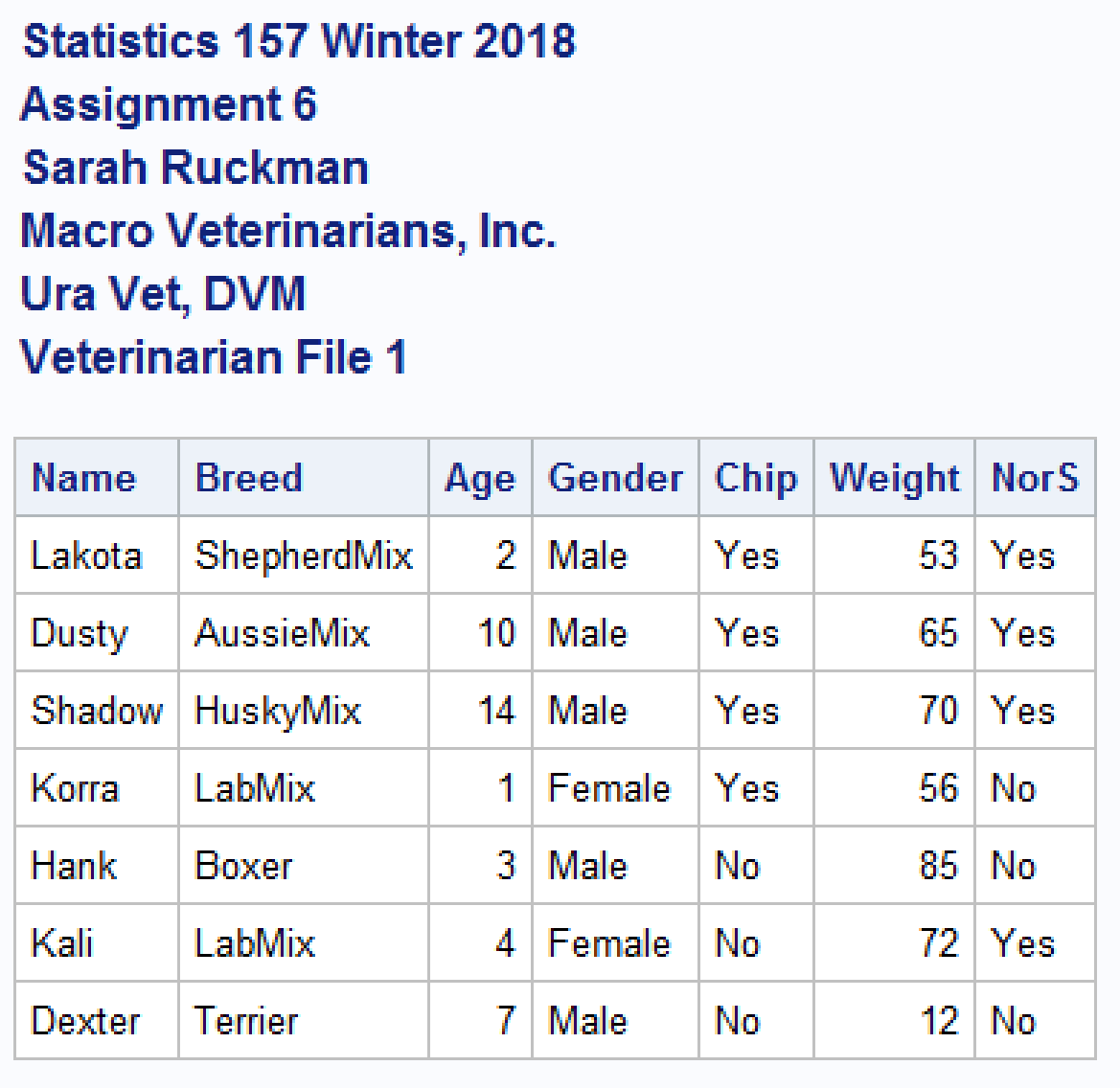
Be sure you change the path to your file\*/

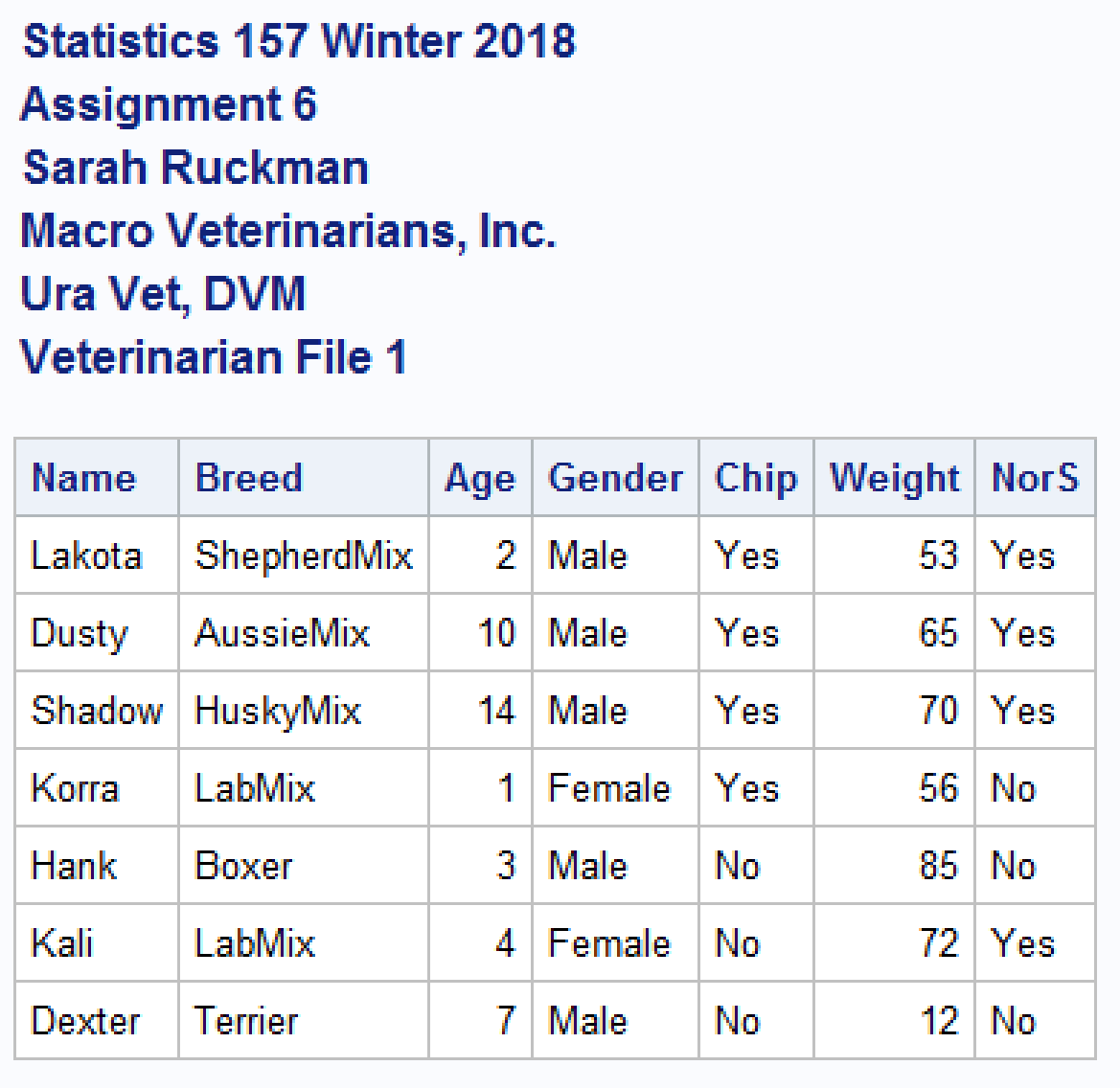
%***indata1***(**1**,**2**,dog,b,C:\Users\sarah\Downloads\dogs\_w18);

**run**;

**quit**;

**Output:**









1. Write a SAS macro called heading1 to read in the following headings: (3 pts)

MACRO VETERINARIANS, INC.

Ura Vet, DVM

Veterinarian File XX (where XX is the number of the file - 1 for dogs\_w181.xls 2 for dogs\_w182.xls )

These titles should be in addition to the usual titles. Thus they should be titles 4, 5 and 6. (You may include the original titles in this macro!)

**SAS Code:**

/\*

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macro heading1 macro to generate titles

Parameters

what parameter to identify what object

number1 number of the object

quarter1 quarter and year

filenum which data file (1 or 2)

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\*/

**%macro** heading1(what,number1,quarter1,filenum);

title1 "Statistics 157 &quarter1";

title2 "&what &number1";

title3 "Sarah Ruckman";

title4 "Macro Veterinarians, Inc.";

title5 "Ura Vet, DVM";

title6 "Veterinarian File &filenum";

%\*Close the macro;

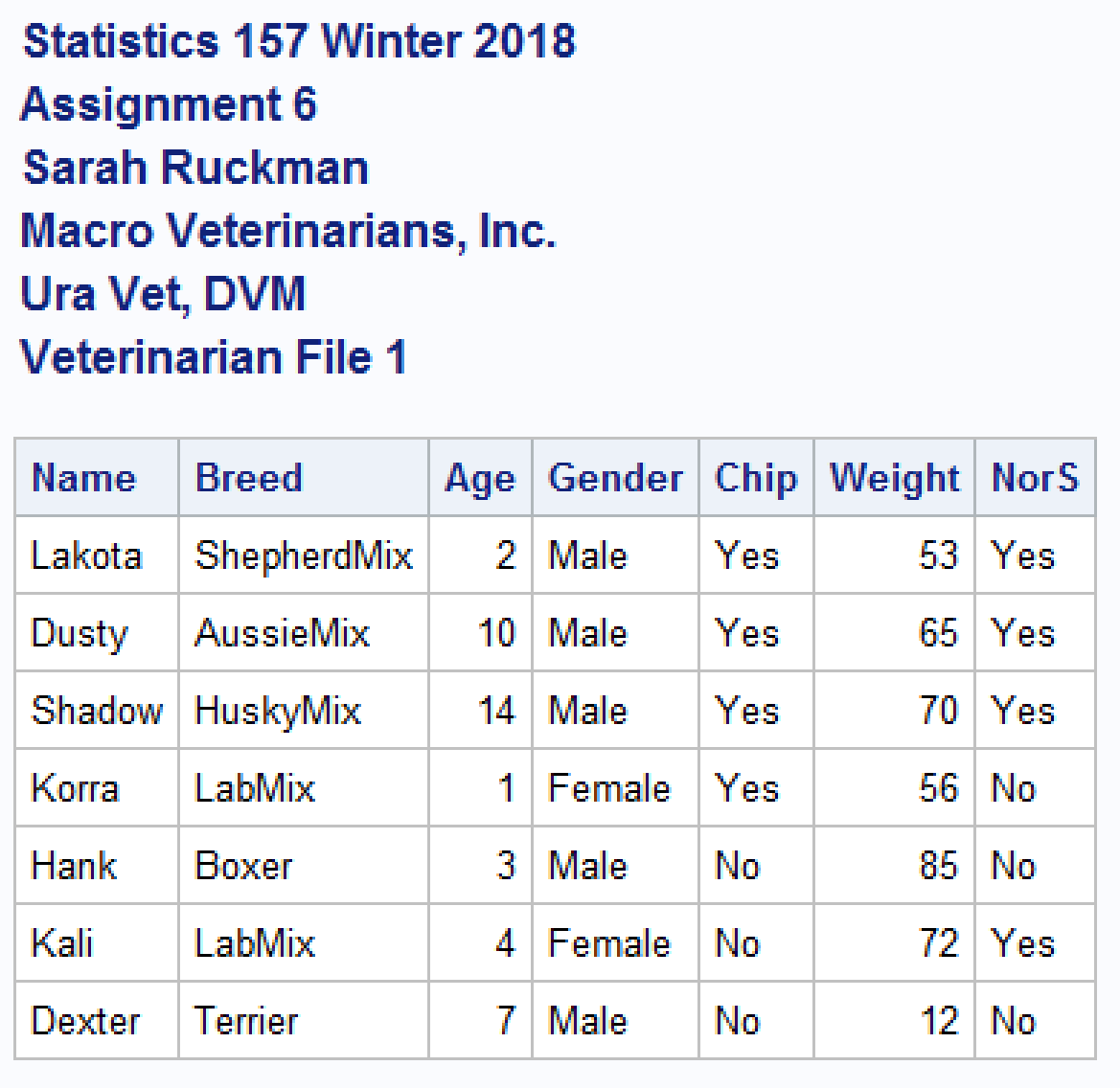
**%mend** heading1;

**ADDED NEXT LINES AFTER DATA STEP in indata1 macro:**

%\* Format %heading1(what,number1,quarter1,&i);

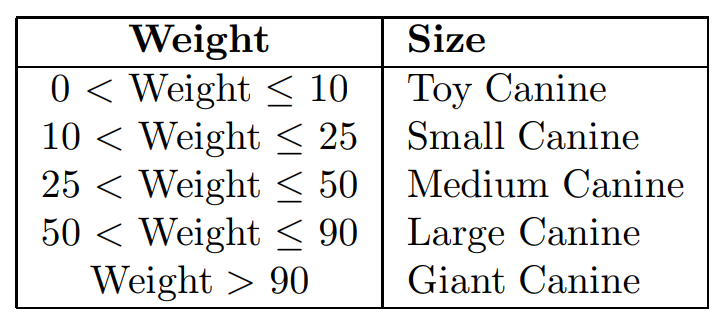
%***heading1***(Assignment,**6**,Winter **2018**,&i);

**Output:**





1. NEW (5 pts) Write a SAS macro called sizing to determine the size of each dog, according to the following limits:



**SAS Code:**

**Added after heading1 macro:**

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Macro sizing to clasify each dog according to size

Variable specifications:

size name of size variable

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**%macro** ***sizing***;

if Weight <= **10** then size = 'Toy Canine ';

else if **10** < Weight <= **25** then size = 'Small Canine ';

else if **25** < Weight <= **50** then size = 'Medium Canine';

else if **50** < Weight <= **90** then size = 'Large Canine ';

else size = 'Giant Canine ';

**%mend** sizing;

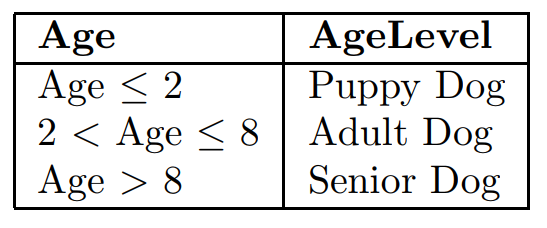
**Added to indata1 macro after set command:**

%\* Classify dogs according to size;

%***sizing***;

**Output:**

1. NEW (5 pts) Write a SAS macro called ageclass to determine the age class of each dog, according to the following limits: (Guidelines from Eukanuba & Iams)



1. NEW (5 pts) Write a SAS macro called univar1 (to be invoked inside the indata macro) which will print the sample size (n), mean, median and standard deviation for each data set for any specified variable. The variable should be sent across as a parameter! Test your macro using the variable weight. (NOTE: You may have to change the number of parameters in the indata1 macro.)
2. Create a new temporary SAS dataset, called combine1 that contains and prints all the data. Be sure you modify title6 to reflect that this is the Combined Data. Make this generic enough to combine any number of data sets, not just two. (Hint: Make use of a namelst macro!) (6 pts)