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## STAT 480: Homework 3

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**Name:**Kyle Salitrik | **ID#:** 997543474 | **PSU ID:** *kps168*

September 10, 2018

## PROBLEM 1

Below is the output from the print statement for the dataset:

1	Output Dataset: STAT480 Homework 3 Problem 1							1
2	17:36 Monday, September 10, 2018							
3								
4		town_	town_			temp_	temp_	
5	Obs	name	number	month	year	low_F	high_F	
6								
7	1	Kane	20	12	2005	12	25	
8	2	Ambler	22	12	2005	8	20	
9	3	Kane	20	1	2006	13	32	
10	4	Oakey	32	12	2005	30	50	
11	5	Oakey	32	1	2006	25	45	
12	6	Ambler	22	1	2006	15	28	

Listing 1: "City Temperature Records"

Next is the output for the descriptor of the dataset that was created:

1	Output Dataset: STAT480 Homework 3 Problem 1				2
2	17:36 Monday, September 10, 2018				
3					
4	The CONTENTS Procedure				
5					
6	Data Set Name	STAT480.HW3_P1	Observations	6	
7	Member Type	DATA	Variables	6	
8	Engine	V9	Indexes	0	
9	Created	09/10/2018 17:36:59	Observation Length	48	
10	Last Modified	09/10/2018 17:36:59	Deleted Observations	0	
11	Protection		Compressed	NO	
12	Data Set Type		Sorted	NO	
13	Label				
14	Data Representation	WINDOWS_64			
15	Encoding	utf-8 Unicode (UTF-8)			
16					
17					
18	Engine/Host Dependent Information				
19					
20	Data Set Page Size	65536			
21	Number of Data Set Pages	1			
22	First Data Page	1			
23	Max Obs per Page	1361			
24	Obs in First Data Page	6			
25	Number of Data Set Repairs	0			
26	ExtendObsCounter	YES			
27	Filename	C:\STAT480\hw3_p1.sas7bdat			
28	Release Created	9.0401M5			
29	Host Created	X64_10HOME			
30	Owner Name	DESKTOP-0I3H148\ksali			
31	File Size	128KB			
32	File Size (bytes)	131072			
33					
34					
35	Alphabetic List of Variables and Attributes				
36					
37	#	Variable	Type	Len	
38					
39	3	month	Num	8	
40	6	temp_high_F	Num	8	
41	5	temp_low_F	Num	8	
42	1	town_name	Char	8	
43	2	town_number	Num	8	
44	4	year	Num	8	

Listing 2: "City Temperature Records Descriptor"

## PROBLEM 2

The following is the output from printing the rats dataset:

1	Output Dataset: STAT480 Homework 3 Problem 2						3
2							
3		rat_					
4	Obs	number	dob	disease	death	group	
5							
6	1	1	16924	16975	16980	A	
7	2	2	16922	16979	16987	A	
8	3	3	16924	16977	16983	A	
9	4	4	16928	16989	16997	A	
10	5	5	16923	16981	17004	B	
11	6	6	16927	16985	17015	B	
12	7	7	11081	16983	17011	B	
13	8	8	16930	16997	17031	B	

Listing 3: "Rats Data"

## SAS CODE

```
1 LIBNAME STAT480 'C:\STAT480\';
2
3 DATA STAT480.hw3_p1;
4     INPUT town_name $ town_number month year temp_low_F temp_high_F;
5     DATALINES;
6     Kane    20   12   2005   12   25
7     Ambler  22   12   2005    8   20
8     Kane    20   01   2006   13   32
9     Oakey   32   12   2005   30   50
10    Oakey   32   01   2006   25   45
11    Ambler  22   01   2006   15   28
12    ;
13 RUN;
14
15 PROC PRINT data=STAT480.hw3_p1;
16     title 'Output Dataset: STAT480 Homework 3 Problem 1';
17 RUN;
18
19 PROC CONTENTS data=STAT480.hw3_p1;
20     OPTIONS LS=80 CENTER;
21 RUN;
22 DATA rats;
23     INFILE 'C:\STAT480\rats.dat';
24     INPUT
25         @1 rat_number 1.
26         +2 dob date9.
27         @13 disease date9.
28         @23 death mmddy8.
29         @32 group $1.
30     ;
31 RUN;
32 PROC PRINT data=rats;
33     OPTIONS LS=78 PS=56 CENTER NODATE;
34     title 'Output Dataset: STAT480 Homework 3 Problem 2';
35 RUN;
```

## SAS LOG FILE

```
1 NOTE: Copyright (c) 2016 by SAS Institute Inc., Cary, NC, USA.
2 NOTE: SAS (r) Proprietary Software 9.4 (TS1M5)
3     Licensed to PENNSYLVANIA STATE UNIVERSITY – SFA T&R, Site 70080099.
4 NOTE: This session is executing on the X64_10HOME platform.
5
6
7
8 NOTE: Updated analytical products:
9
10     SAS/STAT 14.3
11     SAS/ETS 14.3
12     SAS/IML 14.3
13     SAS/QC 14.3
14
15 NOTE: Additional host information:
16
17 X64_10HOME WIN 10.0.17134 Workstation
18
19 NOTE: SAS initialization used:
20     real time             0.73 seconds
21     cpu time              0.64 seconds
22
23 1 LIBNAME STAT480 'C:\STAT480\';
```

```

24 NOTE: Libref STAT480 was successfully assigned as follows:
25     Engine:          V9
26     Physical Name: C:\STAT480
27 2
28 3     DATA STAT480.hw3_p1;
29 4         INPUT town_name $ town_number month year temp_low_F temp_high_F;
30 5         DATALINES;
31
32 NOTE: Data file STAT480.HW3_P1.DATA is in a format that is native to another host, or
the file
33     encoding does not match the session encoding. Cross Environment Data Access
will be used, which
34     might require additional CPU resources and might reduce performance.
35 NOTE: The data set STAT480.HW3_P1 has 6 observations and 6 variables.
36 NOTE: DATA statement used (Total process time):
37     real time          0.02 seconds
38     cpu time           0.01 seconds
39
40
41 12         ;
42 13     RUN;
43 14
44 15     PROC PRINT data=STAT480.hw3_p1;
45 NOTE: Data file STAT480.HW3_P1.DATA is in a format that is native to another host, or
the file
46     encoding does not match the session encoding. Cross Environment Data Access
will be used, which
47     might require additional CPU resources and might reduce performance.
48 16         title 'Output Dataset: STAT480 Homework 3 Problem 1';
49 17     RUN;
50
51 NOTE: There were 6 observations read from the data set STAT480.HW3_P1.
52 NOTE: PROCEDURE PRINT used (Total process time):
53     real time          0.02 seconds
54     cpu time           0.03 seconds
55
56
57 18
58 19     PROC CONTENTS data=STAT480.hw3_p1;
59 NOTE: Data file STAT480.HW3_P1.DATA is in a format that is native to another host, or
the file
60     encoding does not match the session encoding. Cross Environment Data Access
will be used, which
61     might require additional CPU resources and might reduce performance.
62 20         OPTIONS LS=80 CENTER;
63 21     RUN;
64
65 NOTE: PROCEDURE CONTENTS used (Total process time):
66     real time          0.02 seconds
67     cpu time           0.00 seconds
68
69
70 22     DATA rats;
71 23         INFILE 'C:\STAT480\rats.dat';
72 24         INPUT
73 25             @1 rat_number 1.
74 26             +2 dob date9.
75 27             @13 disease date9.
76 28             @23 death mmddyy8.
77 29             @32 group $1.
78 30             ;
79 31     RUN;
80
81 NOTE: The infile 'C:\STAT480\rats.dat' is:
82     Filename=C:\STAT480\rats.dat,
83     RECFM=V,LRECL=32767,File Size (bytes)=270,

```

```
84      Last Modified=10Sep2018:16:46:45,
85      Create Time=10Sep2018:16:46:44
86
87 NOTE: 8 records were read from the infile 'C:\STAT480\rats.dat'.
88      The minimum record length was 32.
89      The maximum record length was 32.
90 NOTE: The data set WORK.RATS has 8 observations and 5 variables.
91 NOTE: DATA statement used (Total process time):
92      real time          0.02 seconds
93      cpu time           0.00 seconds
94
95
96 32  PROC PRINT data=rats;
97 33      OPTIONS LS=78 PS=56 CENTER NODATE;
98 34      title 'Output Dataset: STAT480 Homework 3 Problem 2';
99 35  RUN;
100
101 NOTE: There were 8 observations read from the data set WORK.RATS.
102 NOTE: PROCEDURE PRINT used (Total process time):
103      real time          0.01 seconds
104      cpu time           0.00 seconds
```