Program Summary - Data_Prep&Merge.sas

Execution Environment

Author:	u63876948
File:	/home/u63876948/Portfolio/Merge/Data_Prep&Merge.sas
SAS Platform:	Linux LIN X64 5.14.0-284.30.1.el9_2.x86_64
SAS Host:	ODAWS02-USW2-2.ODA.SAS.COM
SAS Version:	9.04.01M7P08062020
SAS Locale:	en_US
Submission Time:	11/10/2024, 6:43:21 PM
Browser Host:	135.0.146.25
User Agent:	Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/130.0.0.0 Safari/537.36
Application Server:	ODAMID00-USW2-2.ODA.SAS.COM

Code: Data_Prep&Merge.sas

```
*define the library name "mylib" and specify its location using libname;

libname mylib '/home/u63876948/Portfolio/Merge';

* Use proc import DATAFILE to import customer_banking_info_promo.xlsx into a sas dataset named customer_banking_

proc import datafile= '/home/u63876948/Portfolio/Merge/customer_banking_info_promo.xlsx'
    out = mylib.customer_banking_info_promo
    dbms=xlsx;
    getnames=YES;
run;

* Print the first five rows of the dataset add (obs=5) at the end of proc print.;

proc print data= mylib.customer_banking_info_promo (obs=5);
run;

/*Examine the variable Customer ID. Check the type and format.
Use proc content procedure to examine the variables and their types. This will also print more details.*/

proc contents data= mylib.customer_banking_info_promo;
run;

/*keep the output dataset name same as input (customer_banking_info_promo)
Rename "customer_id2" to customer_id
drop the column "duration" from the dataset.*/

data mylib.customer_banking_info_promo;
    set mylib.customer_banking_info_promo;
    rename customer_id2 = customer_id;
    drop duration;
run;

* print the first 5 observations in the dataset;

proc print data = mylib.customer_banking_info_promo (obs=5);
run;

/*Q4. Load data from customer_banking_info.csv*/
* load the data and print the first five rows.;

proc import datafile = '/home/u63876948/Portfolio/Merge/customer_banking_info.csv'
    out = mylib.customer_banking_info
    dbms= csv;
    getnames= yes;
run;

proc print data = mylib.customer_banking_info (obs = 5);
run;


* use proc contents to examine the list of variables as before. You will see that customer_id1 is numerical wit

proc contents data = mylib.customer_banking_info;
run;

*keep the output dataset name same as the input dataset name (customer_banking_info)
Rename "customer_id1" as customer_id;

data mylib.customer_banking_info;
    set mylib.customer_banking_info;
    rename customer_id1 = customer_id;
run;
```

```
* print the first 5 observations in the dataset;

proc print data=mylib.customer_banking_info (obs =5);
run;

/*Q6. SAS data from customer_demographics.sas7bdat*/
* print the first 5 rows of customer_demographics.sas7bdat;

proc print data = mylib.customer_demographics (obs =5);
run;

* use proc contents and examine the list of variables. What is the type of customer_id? Ans: Numeric ;

proc contents data= mylib.customer_demographics;
run;

/* Q7. Convert from character to numeric type */
* the output dataset name customer_banking_info_promocv
to convert customer_id to numeric variable, we use the input function.;

data mylib.customer_banking_info_promocv;
    set mylib.customer_banking_info_promo;
    new_customer_id = input(customer_id, 8.);
    drop customer_id;
    rename new_customer_id = customer_id;
run;

*check the customer_id variable type again by using proc contents or proc means to see the list of numerical va

proc contents data=mylib.customer_banking_info_promocv;
run;

proc means data=mylib.customer_banking_info_promocv;
run;

/* Q8. Data Merging */
*Join the three sources of data into a single SAS data set.
sort each of the datasets by customer_id;

proc sort data =mylib.customer_banking_info_promocv;
by customer_id;
run;

proc sort data =mylib.customer_banking_info;
by customer_id;
run;

proc sort data= mylib.customer_demographics;
by customer_id;
run;

*merge the three datasets using the merge function within a data step. name the new dataset as "customer_all";

data mylib.customer_all;
    merge mylib.customer_banking_info_promocv
        mylib.customer_banking_info
        mylib.customer_demographics;
    by customer_id;
run;

*print the first five observations.;

proc print data= mylib.customer_all (obs=5);
run;
```

Log: Data_Prep&Merge.sas

Notes (52)

```
1          OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
68
69
70         *define the library name "mylib" and specify its location using libname;
71
72         libname mylib '/home/u63876948/Portfolio/Merge';
NOTE: Libref MYLIB was successfully assigned as follows:
      Engine:        V9
```

```
      Physical Name: /home/u63876948/Portfolio/Merge
73
74         * Use proc import DATAFILE to import customer_banking_info_promo.xlsx into a sas dataset named
74       ! customer_banking_info_promo under mylib;
75
76         proc import datafile= '/home/u63876948/Portfolio/Merge/customer_banking_info_promo.xlsx'
77         out = mylib.customer_banking_info_promo
78         dbms=xlsx;
79         getnames=YES;
80         run;

NOTE: One or more variables were converted because the data type is not supported by the V9 engine. For more details, run with
      options MSGLEVEL=I.
NOTE: The import data set has 10578 observations and 10 variables.
NOTE: MYLIB.CUSTOMER_BANKING_INFO_PROMO data set was successfully created.
NOTE: PROCEDURE IMPORT used (Total process time):
      real time           0.86 seconds
      user cpu time       0.85 seconds
      system cpu time     0.01 seconds
      memory              5957.18k
      OS Memory           30204.00k
      Timestamp           11/10/2024 11:43:20 PM
      Step Count                        74  Switch Count  1
      Page Faults                       0
      Page Reclaims                     1231
      Page Swaps                        0
      Voluntary Context Switches        59
      Involuntary Context Switches      3
      Block Input Operations            0
      Block Output Operations           1544


81
82         * Print the first five rows of the dataset add (obs=5) at the end of proc print.;
83
84         proc print data= mylib.customer_banking_info_promo (obs=5);
85         run;

NOTE: There were 5 observations read from the data set MYLIB.CUSTOMER_BANKING_INFO_PROMO.
NOTE: PROCEDURE PRINT used (Total process time):
      real time           0.01 seconds
      user cpu time       0.02 seconds
      system cpu time     0.00 seconds
      memory              1921.93k
      OS Memory           27048.00k
      Timestamp           11/10/2024 11:43:20 PM
      Step Count                        75  Switch Count  0
      Page Faults                       0
      Page Reclaims                     191
      Page Swaps                        0
      Voluntary Context Switches        9
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           8


86
87         /*Examine the variable Customer ID. Check the type and format.
88         Use proc content procedure to examine the variables and their types. This will also print more details.*/
89
90         proc contents data= mylib.customer_banking_info_promo;
91         run;

NOTE: PROCEDURE CONTENTS used (Total process time):
      real time           0.03 seconds
      user cpu time       0.03 seconds
      system cpu time     0.00 seconds
      memory              1865.40k
      OS Memory           27308.00k
      Timestamp           11/10/2024 11:43:20 PM
      Step Count                        76  Switch Count  0
      Page Faults                       0
      Page Reclaims                     220
      Page Swaps                        0
      Voluntary Context Switches        9
      Involuntary Context Switches      1
      Block Input Operations            0
      Block Output Operations           24


92
93         /*keep the output dataset name same as input (customer_banking_info_promo)
94         Rename "customer_id2" to customer_id
95         drop the column "duration" from the dataset.*/
96
97         data mylib.customer_banking_info_promo;
98         set mylib.customer_banking_info_promo;
99         rename customer_id2 = customer_id;
100        drop duration;
101        run;

NOTE: There were 10578 observations read from the data set MYLIB.CUSTOMER_BANKING_INFO_PROMO.
NOTE: The data set MYLIB.CUSTOMER_BANKING_INFO_PROMO has 10578 observations and 9 variables.
NOTE: DATA statement used (Total process time):
      real time           0.01 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              2295.53k
```

```
      OS Memory           27308.00k
      Timestamp           11/10/2024 11:43:20 PM
      Step Count                        77  Switch Count  1
      Page Faults                       0
      Page Reclaims                     230
      Page Swaps                        0
      Voluntary Context Switches        76
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           1544


102
103       * print the first 5 observations in the dataset;
104
105       proc print data = mylib.customer_banking_info_promo (obs=5);
106       run;

NOTE: There were 5 observations read from the data set MYLIB.CUSTOMER_BANKING_INFO_PROMO.
NOTE: PROCEDURE PRINT used (Total process time):
      real time           0.01 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              1340.12k
      OS Memory           27048.00k
      Timestamp           11/10/2024 11:43:20 PM
      Step Count                        78  Switch Count  0
      Page Faults                       0
      Page Reclaims                     190
      Page Swaps                        0
      Voluntary Context Switches        9
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           0


107
108       /*Q4. Load data from customer_banking_info.csv*/
109       * load the data and print the first five rows.;
110
111       proc import datafile = '/home/u63876948/Portfolio/Merge/customer_banking_info.csv'
112       out = mylib.customer_banking_info
113       dbms= csv;
114       getnames= yes;
115       run;

NOTE: Unable to open parameter catalog: SASUSER.PARMS.PARMS.SLIST in update mode. Temporary parameter values will be saved to
WORK.PARMS.PARMS.SLIST.
116        /*************************************************************************
117        *   PRODUCT:   SAS
118        *   VERSION:   9.4
119        *   CREATOR:   External File Interface
120        *   DATE:      10NOV24
121        *   DESC:      Generated SAS Datastep Code
122        *   TEMPLATE SOURCE:  (None Specified.)
123        *************************************************************************/
124           data MYLIB.CUSTOMER_BANKING_INFO    ;
125           %let _EFIERR_ = 0; /* set the ERROR detection macro variable */
126           infile '/home/u63876948/Portfolio/Merge/customer_banking_info.csv' delimiter = ',' MISSOVER DSD lrecl=32767
126      ! firstobs=2 ;
127              informat customer_id1 best32. ;
128              informat default $3. ;
129              informat balance best32. ;
130              informat housing $3. ;
131              informat loan $3. ;
132              format customer_id1 best12. ;
133              format default $3. ;
134              format balance best12. ;
135              format housing $3. ;
136              format loan $3. ;
137           input
138                       customer_id1
139                       default  $
140                       balance
141                       housing  $
142                       loan  $
143           ;
144           if _ERROR_ then call symputx('_EFIERR_',1);  /* set ERROR detection macro variable */
145           run;

NOTE: The infile '/home/u63876948/Portfolio/Merge/customer_banking_info.csv' is:
      Filename=/home/u63876948/Portfolio/Merge/customer_banking_info.csv,
      Owner Name=u63876948,Group Name=oda,
      Access Permission=-rw-r--r--,
      Last Modified=10Nov2024:18:30:40,
      File Size (bytes)=230691

NOTE: 10578 records were read from the infile '/home/u63876948/Portfolio/Merge/customer_banking_info.csv'.
      The minimum record length was 17.
      The maximum record length was 24.
NOTE: The data set MYLIB.CUSTOMER_BANKING_INFO has 10578 observations and 5 variables.
NOTE: DATA statement used (Total process time):
      real time           0.02 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              9671.43k
      OS Memory           32540.00k
      Timestamp           11/10/2024 11:43:20 PM
```

```
      Step Count                        79  Switch Count  1
      Page Faults                       0
      Page Reclaims                     145
      Page Swaps                        0
      Voluntary Context Switches        43
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           776


10578 rows created in MYLIB.CUSTOMER_BANKING_INFO from /home/u63876948/Portfolio/Merge/customer_banking_info.csv.



NOTE: MYLIB.CUSTOMER_BANKING_INFO data set was successfully created.
NOTE: The data set MYLIB.CUSTOMER_BANKING_INFO has 10578 observations and 5 variables.
NOTE: PROCEDURE IMPORT used (Total process time):
      real time           0.07 seconds
      user cpu time       0.03 seconds
      system cpu time     0.01 seconds
      memory              9671.43k
      OS Memory           32928.00k
      Timestamp           11/10/2024 11:43:20 PM
      Step Count                        79  Switch Count  8
      Page Faults                       0
      Page Reclaims                     1975
      Page Swaps                        0
      Voluntary Context Switches        138
      Involuntary Context Switches      2
      Block Input Operations            0
      Block Output Operations           824


146
147        proc print data = mylib.customer_banking_info (obs = 5);
148        run;

NOTE: There were 5 observations read from the data set MYLIB.CUSTOMER_BANKING_INFO.
NOTE: PROCEDURE PRINT used (Total process time):
      real time           0.01 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              902.28k
      OS Memory           27688.00k
      Timestamp           11/10/2024 11:43:20 PM
      Step Count                        80  Switch Count  0
      Page Faults                       0
      Page Reclaims                     94
      Page Swaps                        0
      Voluntary Context Switches        6
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           0


149
150
151        * use proc contents to examine the list of variables as before. You will see that customer_id1 is numerical with le
151      ! This is important to check as this column will be used to merge the datasets.;
152
153        proc contents data = mylib.customer_banking_info;
154        run;

NOTE: PROCEDURE CONTENTS used (Total process time):
      real time           0.03 seconds
      user cpu time       0.03 seconds
      system cpu time     0.00 seconds
      memory              1186.84k
      OS Memory           27948.00k
      Timestamp           11/10/2024 11:43:20 PM
      Step Count                        81  Switch Count  0
      Page Faults                       0
      Page Reclaims                     123
      Page Swaps                        0
      Voluntary Context Switches        7
      Involuntary Context Switches      2
      Block Input Operations            0
      Block Output Operations           24


155
156        *keep the output dataset name same as the input dataset name (customer_banking_info)
157        Rename "customer_id1" as customer_id;
158
159        data mylib.customer_banking_info;
160        set mylib.customer_banking_info;
161        rename customer_id1 = customer_id;
162        run;

NOTE: There were 10578 observations read from the data set MYLIB.CUSTOMER_BANKING_INFO.
NOTE: The data set MYLIB.CUSTOMER_BANKING_INFO has 10578 observations and 5 variables.
NOTE: DATA statement used (Total process time):
      real time           0.01 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              1479.46k
      OS Memory           27948.00k
      Timestamp           11/10/2024 11:43:20 PM
```

```
      Step Count                        82  Switch Count  1
      Page Faults                       0
      Page Reclaims                     122
      Page Swaps                        0
      Voluntary Context Switches        60
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           776


163
164       * print the first 5 observations in the dataset;
165
166       proc print data=mylib.customer_banking_info (obs =5);
167       run;

NOTE: There were 5 observations read from the data set MYLIB.CUSTOMER_BANKING_INFO.
NOTE: PROCEDURE PRINT used (Total process time):
      real time           0.01 seconds
      user cpu time       0.02 seconds
      system cpu time     0.00 seconds
      memory              895.15k
      OS Memory           27688.00k
      Timestamp           11/10/2024 11:43:21 PM
      Step Count                        83  Switch Count  0
      Page Faults                       0
      Page Reclaims                     94
      Page Swaps                        0
      Voluntary Context Switches        9
      Involuntary Context Switches      1
      Block Input Operations            0
      Block Output Operations           0


168
169       /*Q6. SAS data from customer_demographics.sas7bdat*/
170       * print the first 5 rows of customer_demographics.sas7bdat;
171
172       proc print data = mylib.customer_demographics (obs =5);
173       run;

NOTE: There were 5 observations read from the data set MYLIB.CUSTOMER_DEMOGRAPHICS.
NOTE: PROCEDURE PRINT used (Total process time):
      real time           0.01 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              952.18k
      OS Memory           27816.00k
      Timestamp           11/10/2024 11:43:21 PM
      Step Count                        84  Switch Count  0
      Page Faults                       0
      Page Reclaims                     142
      Page Swaps                        0
      Voluntary Context Switches        10
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           0


174
175       * use proc contents and examine the list of variables. What is the type of customer_id? Ans: Numeric ;
176
177       proc contents data= mylib.customer_demographics;
178       run;

NOTE: PROCEDURE CONTENTS used (Total process time):
      real time           0.04 seconds
      user cpu time       0.04 seconds
      system cpu time     0.00 seconds
      memory              1256.93k
      OS Memory           28076.00k
      Timestamp           11/10/2024 11:43:21 PM
      Step Count                        85  Switch Count  0
      Page Faults                       0
      Page Reclaims                     171
      Page Swaps                        0
      Voluntary Context Switches        7
      Involuntary Context Switches      2
      Block Input Operations            0
      Block Output Operations           24


179
180       /* Q7. Convert from character to numeric type */
181       * the output dataset name customer_banking_info_promocv
182       to convert customer_id to numeric variable, we use the input function.;
183
184       data mylib.customer_banking_info_promocv;
185       set mylib.customer_banking_info_promo;
186       new_customer_id = input(customer_id, 8.);
187       drop customer_id;
188       rename new_customer_id = customer_id;
189       run;

NOTE: There were 10578 observations read from the data set MYLIB.CUSTOMER_BANKING_INFO_PROMO.
NOTE: The data set MYLIB.CUSTOMER_BANKING_INFO_PROMOCV has 10578 observations and 9 variables.
NOTE: DATA statement used (Total process time):
      real time           0.01 seconds
```

```
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
      memory              2301.34k
      OS Memory           28332.00k
      Timestamp           11/10/2024 11:43:21 PM
      Step Count                        86  Switch Count  1
      Page Faults                       0
      Page Reclaims                     217
      Page Swaps                        0
      Voluntary Context Switches        76
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           1544


190
191        *check the customer_id variable type again by using proc contents or proc means to see the list of numerical variab
192
193        proc contents data=mylib.customer_banking_info_promocv;
194        run;

NOTE: PROCEDURE CONTENTS used (Total process time):
      real time           0.03 seconds
      user cpu time       0.03 seconds
      system cpu time     0.00 seconds
      memory              1576.37k
      OS Memory           28332.00k
      Timestamp           11/10/2024 11:43:21 PM
      Step Count                        87  Switch Count  0
      Page Faults                       0
      Page Reclaims                     219
      Page Swaps                        0
      Voluntary Context Switches        10
      Involuntary Context Switches      2
      Block Input Operations            0
      Block Output Operations           24


195
196        proc means data=mylib.customer_banking_info_promocv;
197        run;

NOTE: There were 10578 observations read from the data set MYLIB.CUSTOMER_BANKING_INFO_PROMOCV.
NOTE: PROCEDURE MEANS used (Total process time):
      real time           0.03 seconds
      user cpu time       0.03 seconds
      system cpu time     0.01 seconds
      memory              7036.21k
      OS Memory           33212.00k
      Timestamp           11/10/2024 11:43:21 PM
      Step Count                        88  Switch Count  1
      Page Faults                       0
      Page Reclaims                     1491
      Page Swaps                        0
      Voluntary Context Switches        39
      Involuntary Context Switches      1
      Block Input Operations            0
      Block Output Operations           0


198
199        /* Q8. Data Merging */
200        *Join the three sources of data into a single SAS data set.
201        sort each of the datasets by customer_id;
202
203        proc sort data =mylib.customer_banking_info_promocv;
204        by customer_id;
205        run;

NOTE: There were 10578 observations read from the data set MYLIB.CUSTOMER_BANKING_INFO_PROMOCV.
NOTE: The data set MYLIB.CUSTOMER_BANKING_INFO_PROMOCV has 10578 observations and 9 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time           0.02 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              2710.46k
      OS Memory           29368.00k
      Timestamp           11/10/2024 11:43:21 PM
      Step Count                        89  Switch Count  1
      Page Faults                       0
      Page Reclaims                     420
      Page Swaps                        0
      Voluntary Context Switches        68
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           1544


206
207        proc sort data =mylib.customer_banking_info;
208        by customer_id;
209        run;

NOTE: There were 10578 observations read from the data set MYLIB.CUSTOMER_BANKING_INFO.
NOTE: The data set MYLIB.CUSTOMER_BANKING_INFO has 10578 observations and 5 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time           0.02 seconds
      user cpu time       0.01 seconds
```

```
      system cpu time     0.00 seconds
      memory              2379.40k
      OS Memory           28984.00k
      Timestamp           11/10/2024 11:43:21 PM
      Step Count                        90  Switch Count  1
      Page Faults                       0
      Page Reclaims                     242
      Page Swaps                        0
      Voluntary Context Switches        54
      Involuntary Context Switches      2
      Block Input Operations            0
      Block Output Operations           776


210
211       proc sort data= mylib.customer_demographics;
212       by customer_id;
213       run;

NOTE: Input data set is already sorted, no sorting done.
NOTE: PROCEDURE SORT used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              870.43k
      OS Memory           27816.00k
      Timestamp           11/10/2024 11:43:21 PM
      Step Count                        91  Switch Count  0
      Page Faults                       0
      Page Reclaims                     129
      Page Swaps                        0
      Voluntary Context Switches        6
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           0


214
215       *merge the three datasets using the merge function within a data step. name the new dataset as "customer_all";
216
217       data mylib.customer_all;
218       merge mylib.customer_banking_info_promocv
219       mylib.customer_banking_info
220       mylib.customer_demographics;
221       by customer_id;
222       run;

NOTE: There were 10578 observations read from the data set MYLIB.CUSTOMER_BANKING_INFO_PROMOCV.
NOTE: There were 10578 observations read from the data set MYLIB.CUSTOMER_BANKING_INFO.
NOTE: There were 10578 observations read from the data set MYLIB.CUSTOMER_DEMOGRAPHICS.
NOTE: The data set MYLIB.CUSTOMER_ALL has 10578 observations and 17 variables.
NOTE: DATA statement used (Total process time):
      real time           0.02 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              4291.84k
      OS Memory           30516.00k
      Timestamp           11/10/2024 11:43:21 PM
      Step Count                        92  Switch Count  1
      Page Faults                       0
      Page Reclaims                     609
      Page Swaps                        0
      Voluntary Context Switches        54
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           2576


223
224       *print the first five observations.;
225
226       proc print data= mylib.customer_all (obs=5);
227       run;

NOTE: There were 5 observations read from the data set MYLIB.CUSTOMER_ALL.
NOTE: PROCEDURE PRINT used (Total process time):
      real time           0.02 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              2001.12k
      OS Memory           28328.00k
      Timestamp           11/10/2024 11:43:21 PM
      Step Count                        93  Switch Count  0
      Page Faults                       0
      Page Reclaims                     257
      Page Swaps                        0
      Voluntary Context Switches        10
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           16


228
229
230
231
232
233
```

```
234         OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
244
```

Results: Data_Prep&Merge.sas

Obs	customer_id2	contact	day	month	duration	campaign	pdays	previous	poutcome	y
1	122482	cellular	22	aug	229	2	-1	0	unknown	no
2	119725	cellular	7	aug	125	2	-1	0	unknown	no
3	103490	unknown	15	may	68	2	-1	0	unknown	no
4	126218	cellular	19	nov	517	2	187	3	failure	no
5	104835	unknown	20	may	165	2	-1	0	unknown	no

The CONTENTS Procedure

Data Set Name	MYLIB.CUSTOMER_BANKING_INFO_PROMO	Observations	10578
Member Type	DATA	Variables	10
Engine	V9	Indexes	0
Created	11/10/2024 18:43:20	Observation Length	72
Last Modified	11/10/2024 18:43:20	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	SOLARIS_X86_64, LINUX_X86_64, ALPHA_TRU64, LINUX_IA64		
Encoding	utf-8 Unicode (UTF-8)		

Engine/Host Dependent Information	
Data Set Page Size	131072
Number of Data Set Pages	6
First Data Page	1
Max Obs per Page	1816
Obs in First Data Page	1773
Number of Data Set Repairs	0
Filename	/home/u63876948/Portfolio/Merge/customer_banking_info_promo.sas7bdat
Release Created	9.0401M7
Host Created	Linux
Inode Number	5711860561
Access Permission	rw-r--r--
Owner Name	u63876948
File Size	896KB
File Size (bytes)	917504

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
6	campaign	Num	8	BEST.		campaign
2	contact	Char	9	$9.	$9.	contact
1	customer_id2	Char	6	$6.	$6.	customer_id2
3	day	Num	8	BEST.		day
5	duration	Num	8	BEST.		duration
4	month	Char	3	$3.	$3.	month
7	pdays	Num	8	BEST.		pdays
9	poutcome	Char	7	$7.	$7.	poutcome
8	previous	Num	8	BEST.		previous
10	y	Char	3	$3.	$3.	y

Obs	customer_id	contact	day	month	campaign	pdays	previous	poutcome	y
1	122482	cellular	22	aug	2	-1	0	unknown	no
2	119725	cellular	7	aug	2	-1	0	unknown	no
3	103490	unknown	15	may	2	-1	0	unknown	no
4	126218	cellular	19	nov	2	187	3	failure	no
5	104835	unknown	20	may	2	-1	0	unknown	no

Obs	customer_id1	default	balance	housing	loan
1	122482	no	347	no	no
2	119725	no	3462	no	no
3	103490	no	157	yes	no
4	126218	no	3689	yes	no
5	104835	no	0	yes	yes

The CONTENTS Procedure

Data Set Name	MYLIB.CUSTOMER_BANKING_INFO	Observations	10578
Member Type	DATA	Variables	5
Engine	V9	Indexes	0
Created	11/10/2024 18:43:21	Observation Length	32
Last Modified	11/10/2024 18:43:21	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			

Data Representation	SOLARIS_X86_64, LINUX_X86_64, ALPHA_TRU64, LINUX_IA64		
Encoding	utf-8 Unicode (UTF-8)		

Engine/Host Dependent Information	
Data Set Page Size	131072
Number of Data Set Pages	3
First Data Page	1
Max Obs per Page	4078
Obs in First Data Page	4002
Number of Data Set Repairs	0
Filename	/home/u63876948/Portfolio/Merge/customer_banking_info.sas7bdat
Release Created	9.0401M7
Host Created	Linux
Inode Number	5711860561
Access Permission	rw-r--r--
Owner Name	u63876948
File Size	512KB
File Size (bytes)	524288

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat
3	balance	Num	8	BEST12.	BEST32.
1	customer_id1	Num	8	BEST12.	BEST32.
2	default	Char	3	$3.	$3.
4	housing	Char	3	$3.	$3.
5	loan	Char	3	$3.	$3.

Obs	customer_id	default	balance	housing	loan
1	122482	no	347	no	no
2	119725	no	3462	no	no
3	103490	no	157	yes	no
4	126218	no	3689	yes	no
5	104835	no	0	yes	yes

Obs	Education	customer_id	AGE	marital	JOB
1	secondary	100103	33	married	entrepreneur
2	tertiary	100106	35	married	management
3	primary	100118	57	married	blue-collar
4	primary	100119	60	married	retired
5	secondary	100121	28	married	blue-collar

The CONTENTS Procedure

Data Set Name	MYLIB.CUSTOMER_DEMOGRAPHICS	**Observations**	10578
Member Type	DATA	**Variables**	5
Engine	V9	**Indexes**	0
Created	01/24/2019 12:27:12	**Observation Length**	48
Last Modified	01/24/2019 12:27:12	**Deleted Observations**	0
Protection		**Compressed**	NO
Data Set Type		**Sorted**	YES
Label			
Data Representation	SOLARIS_X86_64, LINUX_X86_64, ALPHA_TRU64, LINUX_IA64		
Encoding	utf-8 Unicode (UTF-8)		

Engine/Host Dependent Information	
Data Set Page Size	65536
Number of Data Set Pages	8
First Data Page	1
Max Obs per Page	1360
Obs in First Data Page	1310
Number of Data Set Repairs	0
Filename	/home/u63876948/Portfolio/Merge/customer_demographics.sas7bdat
Release Created	9.0401M5
Host Created	Linux
Inode Number	7331724586
Access Permission	rw-r--r--
Owner Name	u63876948
File Size	576KB
File Size (bytes)	589824

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Label
3	AGE	Num	8	F4.	AGE
1	Education	Char	9	$CHAR9.	Education
5	JOB	Char	14	$CHAR14.	JOB
2	customer_id	Num	8		
4	marital	Char	8	$CHAR8.	marital

Sort Information

Sort Information	
Sortedby	customer_id
Validated	YES
Character Set	ASCII

The CONTENTS Procedure

Data Set Name	MYLIB.CUSTOMER_BANKING_INFO_PROMOCV	Observations	10578
Member Type	DATA	Variables	9
Engine	V9	Indexes	0
Created	11/10/2024 18:43:21	Observation Length	64
Last Modified	11/10/2024 18:43:21	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	SOLARIS_X86_64, LINUX_X86_64, ALPHA_TRU64, LINUX_IA64		
Encoding	utf-8 Unicode (UTF-8)		

Engine/Host Dependent Information	
Data Set Page Size	131072
Number of Data Set Pages	6
First Data Page	1
Max Obs per Page	2043
Obs in First Data Page	1996
Number of Data Set Repairs	0
Filename	/home/u63876948/Portfolio/Merge/customer_banking_info_promocv.sas7bdat
Release Created	9.0401M7
Host Created	Linux
Inode Number	5711860561
Access Permission	rw-r--r--
Owner Name	u63876948
File Size	896KB
File Size (bytes)	917504

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
4	campaign	Num	8	BEST.		campaign
1	contact	Char	9	$9.	$9.	contact
9	customer_id	Num	8			
2	day	Num	8	BEST.		day
3	month	Char	3	$3.	$3.	month
5	pdays	Num	8	BEST.		pdays
7	poutcome	Char	7	$7.	$7.	poutcome
6	previous	Num	8	BEST.		previous
8	y	Char	3	$3.	$3.	y

The MEANS Procedure

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
day	day	10578	15.4758934	8.4137946	1.0000000	31.0000000
campaign	campaign	10578	2.4747589	2.6151781	1.0000000	50.0000000
pdays	pdays	10578	51.9548119	109.3471124	-1.0000000	854.0000000
previous	previous	10578	0.8525241	3.4721156	0	275.0000000
customer_id		10578	127278.17	13660.22	100103.00	145309.00

Obs	contact	day	month	campaign	pdays	previous	poutcome	y	customer_id	default	balance	housing	loan	Education	AGE	marital	JOB
1	unknown	5	may	1	-1	0	unknown	no	100103	no	2	yes	yes	secondary	33	married	entrepreneur
2	unknown	5	may	1	-1	0	unknown	no	100106	no	231	yes	no	tertiary	35	married	management
3	unknown	5	may	1	-1	0	unknown	no	100118	no	52	yes	no	primary	57	married	blue-collar
4	unknown	5	may	1	-1	0	unknown	no	100119	no	60	yes	no	primary	60	married	retired
5	unknown	5	may	1	-1	0	unknown	no	100121	no	723	yes	yes	secondary	28	married	blue-collar