

Encrypt

(1) Data Columns Encrypt;

```
In [1]: DATA CARS;
        SET SASHELP.CARS(OBS=10);
        STRING = COLLATE(0, 255);
        HIGH4 = REVERSE(STRING);
        KEEP MAKE MODEL MSRP STRING HIGH4;
        RUN;

        DATA CARS1;
        SET CARS;
        ENCRYPT = TRANSLATE(MODEL, HIGH4, STRING);
        DECRYPT = TRANSLATE(ENCRYPT, STRING, HIGH4);
        RUN;

        PROC PRINT DATA = CARS1;
        VAR MODEL DECRYPT;
        RUN;
```

SAS Connection established. Subprocess id is 26404

Out[1]: The SAS System

Obs	Model	DECRYPT
1	MDX	MDX
2	RSX Type S 2dr	RSX Type S 2dr
3	TSX 4dr	TSX 4dr
4	TL 4dr	TL 4dr
5	3.5 RL 4dr	3.5 RL 4dr
6	3.5 RL w/Navigation 4dr	3.5 RL w/Navigation 4dr
7	NSX coupe 2dr manual S	NSX coupe 2dr manual S
8	A4 1.8T 4dr	A4 1.8T 4dr
9	A41.8T convertible 2dr	A41.8T convertible 2dr
10	A4 3.0 4dr	A4 3.0 4dr

```
In [2]: PROC PRINT DATA = CARS1;
        RUN;
```

```
Out[2]: 58 ods listing close;ods html5 (id=saspy_internal) file=stdout options(bitmap_mode='inline') devi
ce=svg style=HTMLBlue; ods
58 ! graphics on / outputfmt=png;
NOTE: Writing HTML5(SASPY_INTERNAL) Body file: STDOUT
59
60 PROC PRINT DATA = CARS1;
61 RUN;
ERROR: Invalid characters were present in the data.
ERROR: An error occurred while processing text data.
NOTE: The SAS System stopped processing this step because of errors.
NOTE: There were 10 observations read from the data set WORK.CARS1.
NOTE: PROCEDURE PRINT used (Total process time):
      real time          0.00 seconds
      cpu time           0.01 seconds

62
63 ods html5 (id=saspy_internal) close;ods listing;

64
```

(2) Data Macro Encrypt;

```
In [3]:  /* ENCRYPT */
        LIBNAME MPOC "macro/";
        OPTION MSTORED SASMSTORE = MPOC;

        %MACRO STRA_CAL()/STORE SECURE;
            %PUT 1;
        %MEND STRA_CAL;
        %STRA_CAL();
```

Out[3]:

```
66  ods listing close;ods html5 (id=saspy_internal) file=stdout options(bitmap_mode
='inline') device=svg style=HTMLBlue; ods
66 ! graphics on / outputfmt=png;
NOTE: Writing HTML5(SASPY_INTERNAL) Body file: STDOUT
67
68  /* ENCRYPT */
69  LIBNAME MPOC "macro/";
NOTE: Libref MPOC was successfully assigned as follows:
      Engine:          V9
      Physical Name: /folders/myfolders/SASData/macro
70  OPTION MSTORED SASMSTORE = MPOC;
71
72  %MACRO STRA_CAL()/STORE SECURE;
73      %PUT 1;
74  %MEND STRA_CAL;
75  %STRA_CAL();
1
76
77
78  ods html5 (id=saspy_internal) close;ods listing;

79
```

HOW TO USE:

```
/* DECRYPT */
LIBNAME MPOC "macro/";
OPTION MSTORED SASMSTORE = MPOC;

%STRA_CAL();
```

(3) Data Set Encrypt;

```
In [4]:  DATA S_A(ENCRYPT=YES PW=Q1W2E3R4);
        SET SASHELP.CARS;
        RUN;
```

Out[4]:

```
81  ods listing close;ods html5 (id=saspy_internal) file=stdout options(bitmap_mode
='inline') device=svg style=HTMLBlue; ods
81 ! graphics on / outputfmt=png;
NOTE: Writing HTML5(SASPY_INTERNAL) Body file: STDOUT
82
83  DATA S_A(ENCRYPT=YES PW=XXXXXXXX);
84  SET SASHELP.CARS;
85  RUN;
NOTE: There were 428 observations read from the data set SASHELP.CARS.
NOTE: The data set WORK.S_A has 428 observations and 15 variables.
NOTE: DATA statement used (Total process time):
      real time          0.00 seconds
      cpu time           0.00 seconds

86
87  ods html5 (id=saspy_internal) close;ods listing;

88
```

```
In [5]:  /* READ */
        PROC PRINT DATA = S_A;
        RUN;

        /* ALTER */
        PROC DELETE DATA = S_A;
        RUN;
```

```
Out[5]:

90  ods listing close;ods html5 (id=saspy_internal) file=stdout options(bitmap_mode
='inline') device=svg style=HTMLBlue; ods
90 ! graphics on / outputfmt=png;
NOTE: Writing HTML5(SASPY_INTERNAL) Body file: STDOUT
91
92  /* READ */
93  PROC PRINT DATA = S_A;
ERROR: Invalid or missing READ password on member WORK.S_A.DATA.
94  RUN;
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE PRINT used (Total process time):
      real time          0.00 seconds
      cpu time           0.00 seconds

95
96  /* ALTER */
97  PROC DELETE DATA = S_A;
98  RUN;
ERROR: Invalid or missing ALTER password on member WORK.S_A.DATA.
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE DELETE used (Total process time):
      real time          0.00 seconds
      cpu time           0.00 seconds

99
100
101 ods html5 (id=saspy_internal) close;ods listing;

102
```

```
In [6]: DATA S_B;
        SET S_A(PW=Q1W2E3R4);
        RUN;

        PROC PRINT DATA = S_B(OBS=1);
        VAR MAKE;
        RUN;

        PROC DELETE DATA = S_B;
        RUN;
```

Out[6]: The SAS System

Obs	Make	Model	MSRP	STRING	HIGH4	ENCRYPT	DECRYPT
1	Acura	MDX	\$36,945				

Obs	Make
1	Acura