```
*;
*;
     ods graphics on;
*;
* MANOVA Model 1: X9 X10 = X14;
*options ls=80 ps=50 nodate pageno=1;
* Input HATCO ;
ods pdf file="\\Mac\Home\Downloads\HATCO MANOVA X9 X10 By X14.pdf";
Title 'HATCO MANOVA Analysis of Usage and Satisfaction Levels across
Buying Situations';
*;
Data HATCO;
Infile '"\\Mac\Home\Downloads\HATCO X1-X14 Tabs.txt"' DLM = '09'X
TRUNCOVER;
Input X1 X2 X3 X4 X5 X6 X7 X8 X9 X10 X11 X12 X13 X14;
*;
Data HATCO;
     Set HATCO (Keep = X9 \times 10 \times 14);
      Label X9 = 'X9 - Usage Level'
          X10 = 'X10 - Satisfaction Level'
              X14 = 'X14 - Type of buying situation';
*;
Proc Print Data = HATCO;
* Exploratory Data Analysis - Means ;
Proc Means Data = HATCO;
   Var X9 X10;
Proc Sort Data = HATCO;
    By X14;
Proc Means Data = HATCO;
   Var X9 X10;
     By X14;
      ID X14;
*;
* Exploratory Data Analysis - Univariate ;
Proc Univariate Data = HATCO Normal Plot;
   Var X9 X10;
Proc Sort Data = HATCO;
    By X14;
*;
Proc Univariate Data = HATCO Normal Plot;
    Var X9 X10;
     By X14;
     ID X14;
*;
```

```
* GLM MANOVA Analysis ;

*;
Proc GLM Data = HATCO;
   Class X14;
   Model X9 X10 = X14;
   Means X14 / Scheffe Tukey LSD SNK Duncan;
   Means X14 / Hovtest = Levene Hovtest = bf Hovtest = Bartlett;
   Means X14;
   Manova H = X14 / MStat = Exact;

*;
Run;
Quit;
*;
ods pdf close;
```