\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Problem 1 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\*\*\*\*\*\*\*Proc report Method\*\*\*\*\*\*\*\*\*

PROC FORMAT noprint; value $origin 'Asia'='Asia' 'Europe'='Europe' 'USA'='USA'; RUN;

proc sql noprint;

create table cars1 as

select \*

from sashelp.cars

where type='Wagon';

title 'Listing of all wagon cars by region and manufacturers';

ODS listing;

proc report data=cars1 nowd headline headskip spacing=2 ls=142 ps=40;

column ("\_\_" origin Make Model MSRP Invoice EngineSize Cylinders Horsepower);

define origin / group noprint;

define make / display group width=25 'Make';

define model / display format=$15. width=20 'Model';

define MSRP / display format=15. width=20 'MSRP';

define Invoice / display format=15. width=15 'Invoice';

define EngineSize / display format=15. width=18 'EngineSize';

define Cylinders / display format=15. width=14 'Cylinders';

define Horsepower / display format=15. width=14 'Horsepower';

compute before \_page\_ / left;

line 'origin: ' origin $origin. ;

line ' ';

endcomp;

break after make /skip;

run;

ODS listing CLOSE;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*using Mosto \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

%initsystems(initstudy=4, mosto=6, spro=3 )

proc sql noprint;

create table cars1 as

select \*

from sashelp.cars

where type='Wagon';

%insertoption(namevar=model, width=25mm, keep=n);

%insertoption(namevar=msrp, width=20mm, keep=n, Align=C);

%insertoption(namevar=invoice, width=20mm, keep=n, Align=C);

%insertoption(namevar=enginesize, width=15mm, keep=n, Align=C);

%insertoption(namevar=cylinders, width=15mm, keep=n, Align=C);

%insertoption(namevar=horsepower, width=15mm, keep=n, Align=C);

TITLE "Listing of all Wagon cars by region and manufacturer" justify=center;

%datalist(

data = cars1

, page = origin

, by = make

, var = model msrp invoice enginesize cylinders horsepower

, freeline = make

, together =

, maxlen = 20

)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Problem 2 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Proc sql noprint;

create table cars1 as

select \*

from sashelp.cars

where Origin="Asia";

%initsystems(initstudy=4, mosto=6, spro=3 )

title "Descriptive statistics for physical characteristics of Asian cars" justify=center;

%desc\_freq\_tab(

data = cars1

, var = horsepower Weight length wheelbase

, class = type

, total = NO

, stat = MIN MEAN MAX

)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*problem 3\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Proc sql noprint;

create table cars1 as

select \*

from sashelp.cars;

title "Distribution of car design types by region" justify=center;

%freq\_tab(

data = cars1

, var = type drivetrain

, class = origin

, total = YES

)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Problem 4\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

%initsystems(initstudy=4, mosto=6, spro=3, adamap=1, gral=4, eva=1, poster=1, woops=1, cars=1)

DATA cars1(rename=(type=type\_1));

SET sashelp.cars;

ord=\_n\_;

RUN;

DATA cars2;

SET cars1;

where msrp <12000;

RUN;

title "Availability of cars under $12,000 by region and manufacturer" justify=center;

%incidence\_print(

data = cars1

, data\_n = cars2

, subject = ord

, var = origin make

, class = type\_1

, total = YES

, evlabel = Manufacturer

, anytxt = Any car under $12k

)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Problem 5\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

DATA car5;

SET sashelp.cars;

diff=msrp-invoice;

RUN;

title "Difference between MSRP and Invoice price by region" justify=center;

%overview\_tab(

data = car5

, data\_n = car5

, class = origin

, subject = make model invoice

, total = NO

, groups = "diff<300"\*"Less than $300"

"300<=diff<1000"\*"$300 up to $1000"

"1000<=diff<2000"\*"$1000 up to $2000"

"2000<=diff<3000"\*"$2000 up to $3000"

"diff>=3000"\*"$3000 and above"

)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*problem6\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

proc sort data=sashelp.cars(keep=origin type make model msrp invoice cylinders horsepower) out=cars1;

by origin type descending invoice;

RUN;

proc sort data=cars1 out=cars2 nodupkey;

by origin type;

RUN;

proc sort data=sashelp.cars(keep=origin) out=orig nodupkey;

by origin ;

RUN;

/\*Column alignment\*/

%insertoption(namevar=model, width=25mm, keep=n);

%insertoption(namevar=msrp, width=25mm, keep=n, Align=C);

%insertoption(namevar=invoice, width=25mm, keep=n, Align=C);

%insertoption(namevar=cylinders, width=25mm, keep=n, Align=C);

%insertoption(namevar=horsepower, width=25mm, keep=n, Align=C);

ods exclude all;

/\*Listing creation\*/

PROC FORMAT NOPRINT;

value $origin 'Asia'='Asia'

'Europe'='Europe'

'USA'='USA'

;

RUN;

ods exclude none;

ods listing;

title "The most expensive cars manufactured in $origin$ by type" justify=center;

%datalist(

data = cars2

, page = origin

, by =

, order = origin

, tablesby = orig

, var = type make model msrp invoice cylinders horsepower

, maxlen = optimal

)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Problem 7\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

%initsystems(initstudy=4, mosto=6, spro=3, adamap=1, gral=4, eva=1, poster=1, woops=1, cars=1)

data cars1;

set sashelp.cars;

value=invoice;

RUN;

%insertoption(namevar=make, width=15mm, keep=n);

%insertoption(namevar=model, width=32mm, keep=n);

%insertoption(namevar=type, width=15mm, keep=n);

%insertoption(namevar=drivetrain, width=12mm, keep=n);

%insertoption(namevar=msrp, width=15mm, keep=n, Align=C);

%insertoption(namevar=invoice, width=15mm, keep=n, Align=C);

%insertoption(namevar=enginesize, width=15mm, keep=n, Align=R);

%insertoption(namevar=cylinders, width=15mm, keep=n, Align=R);

%insertoption(namevar=horsepower, width=15mm, keep=n, Align=R);

%insertoption(namevar=mpg\_city, width=12mm, keep=n, Align=R);

%insertoption(namevar= mpg\_highway, width=12mm, keep=n, Align=R);

%insertoption(namevar=weight, width=12mm, keep=n, Align=R);

%insertoption(namevar=wheelbase, width=12mm, keep=n, Align=R);

%insertoption(namevar=length, width=12mm, keep=n, Align=R);

%startMostoRTF(file=/var/swan/root/bhc/general/playground/training/12345/stat/main24/dev/analysis/docum, onlyrtf=NO, toc=NO,toctable=NO);

TITLE "Listing of all cars" justify=center;

%datalist(

data = cars1

, page = origin

, by = make descending value

, order = value

, var = model type drivetrain msrp invoice enginesize cylinders horsepower mpg\_city mpg\_highway weight wheelbase length

, freeline = make

, together =

)

%endMostoRTF;