

```
*SAS BOXPLOT;
```

```
/*
Box plots may also have lines extending vertically from the boxes
(whiskers) indicating variability outside the upper and lower quartiles.
The bottom and top of the box are always the first and third quartiles,
and the band inside the box is always the second quartile (the median).
In SAS a simple Boxplot is created
using PROC SGPLOT and paneled boxplot is created using PROC SGPANEL.
```

```
Syntax:
```

```
PROC SGPLOT DATA = DATASET;
    VBOX VARIABLE / category = VARIABLE;
RUN;
```

```
PROC SGPANEL DATA = DATASET;;
PANELBY VARIABLE;
    VBOX VARIABLE> / category = VARIABLE;
RUN;
```

```
*/
```

```
*Simple Boxplot;
```

```
PROC SQL;
```

```
create table CARS1 as
SELECT make, model, type, invoice, horsepower, length, weight
FROM
    SASHELP.CARS
WHERE make in ('Audi','BMW')
;
RUN;
```

```
PROC SGPLOT DATA = CARS1;
```

```
VBOX horsepower
/ category = type;
```

```
title 'Horsepower of cars by types';
```

```
RUN;
```

```
*Boxplot in Vertical Panels;
```

```
/*
```

We can divide the Boxplots of a variable into many vertical panels(columns). Each panel holds the boxplots for all the categorical variables. But the boxplots are further grouped using another third variable which divides the graph into multiple panels.

```
*/
```

```
PROC SGPANEL DATA = CARS1;
```

```
PANELBY MAKE;
```

```
VBOX horsepower / category = type;
```

```
title 'Horsepower of cars by types';
```

```
RUN;
```

```
*Boxplot in Horizontal Panels;
```

```
/*
```

We can divide the Boxplots of a variable into many horizontal panels(rows). Each panel holds the boxplots for all the categorical variables. But the boxplots are further grouped using another third variable which divides the graph into multiple panels.

```
*/
```

```
PROC SGPANEL DATA = CARS1;
```

```
PANELBY MAKE / columns = 1 novarname;
```

```
VBOX horsepower / category = type;
```

```
title 'Horsepower of cars by types';  
RUN;
```