

Name: Samriddhi Verma  
Reg. No.: 16BCE1375  
Slot: L49+L50  
CSE3020

# WEEK-3

## EXERCISE: QPLOT BASICS

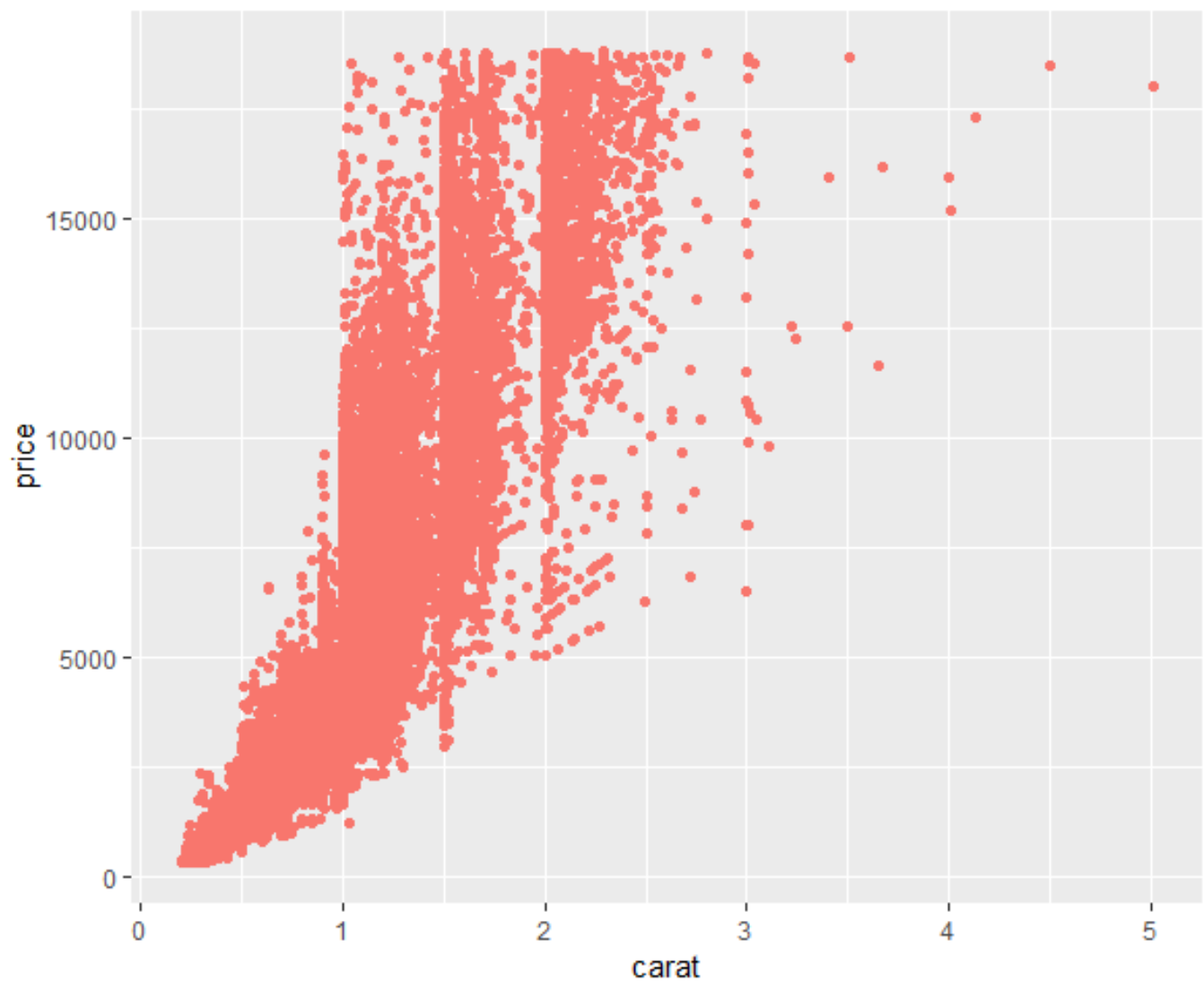
### CODE:

```
library(ggplot2)
```

```
View(diamonds)
```

```
qplot(carat,price,data=diamonds,col="tomato3")
```

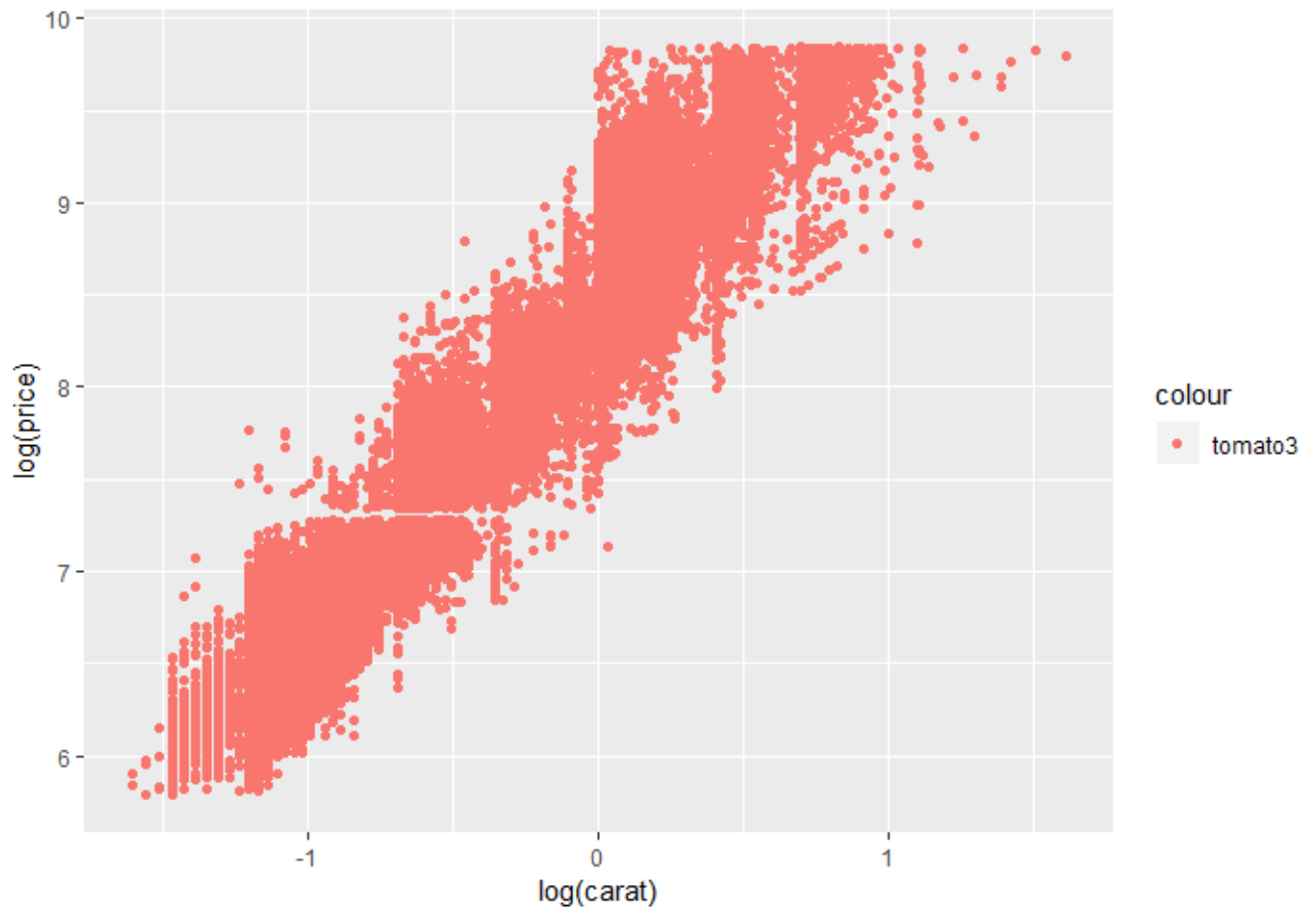
➔ exponential growth #qplot produces scatterplot by default. x-axis and y-axis are respective defaults in the ()



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```
qplot(log(carat),log(price),data=diamonds, col="tomato3")
```

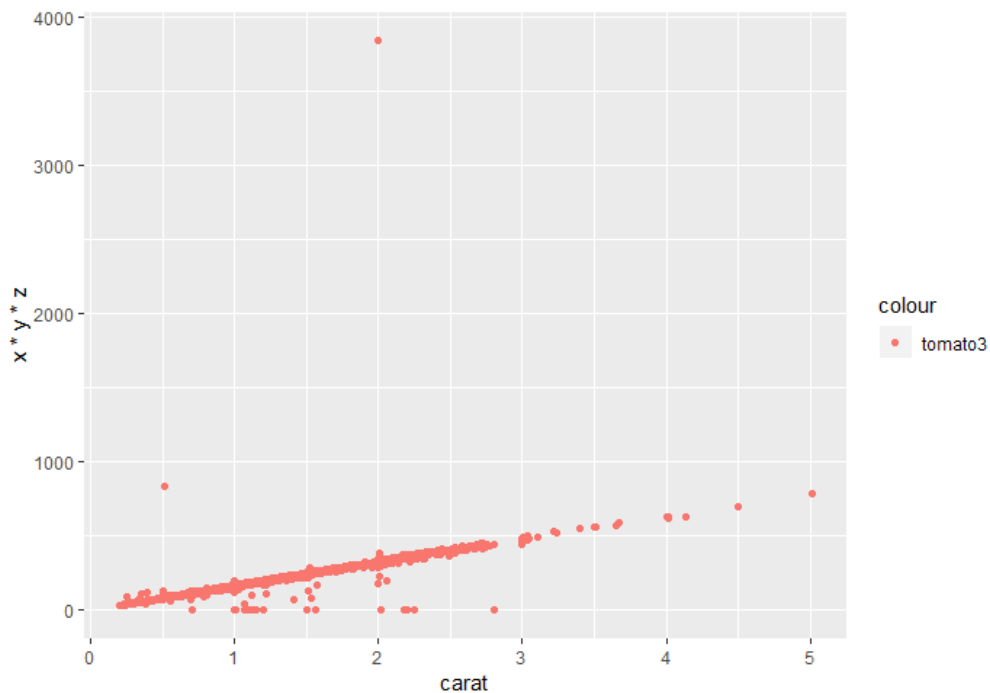
➔ linear growth is seen



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```
qplot(carat, x * y * z, data=diamonds, col="tomato3")
```

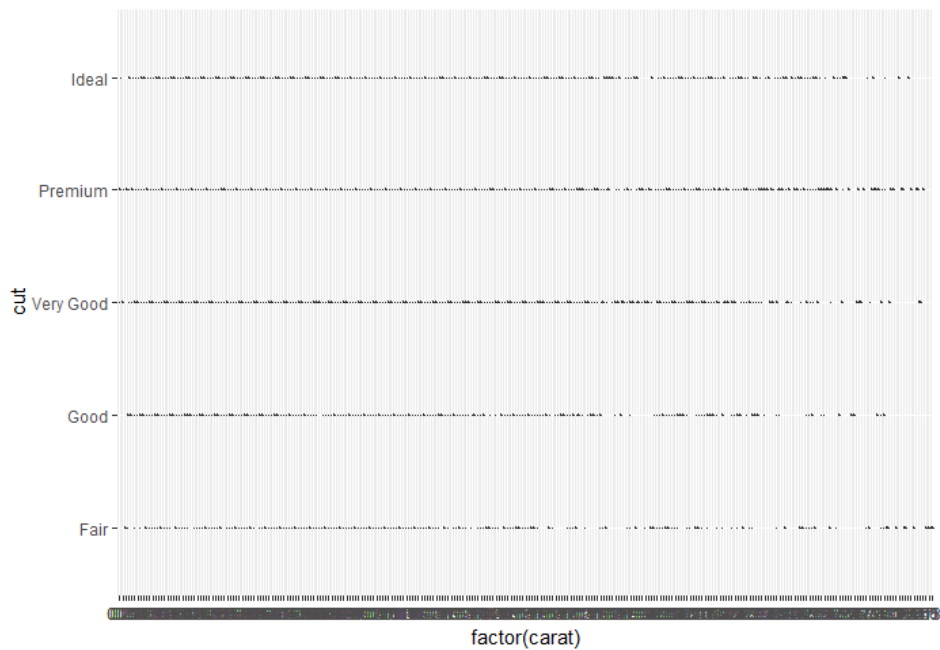
➔ weight vs volume graph #observation: Density is supposed to be constant. Also Linear relation is seen.



```
qplot(factor(carat), cut, data = diamonds, geom = c("boxplot"))
```

➔ Used to illustrate the box plot to see the statistical parts such as mean/median, upper and lower percentiles, as well as the lower and upper outliers.

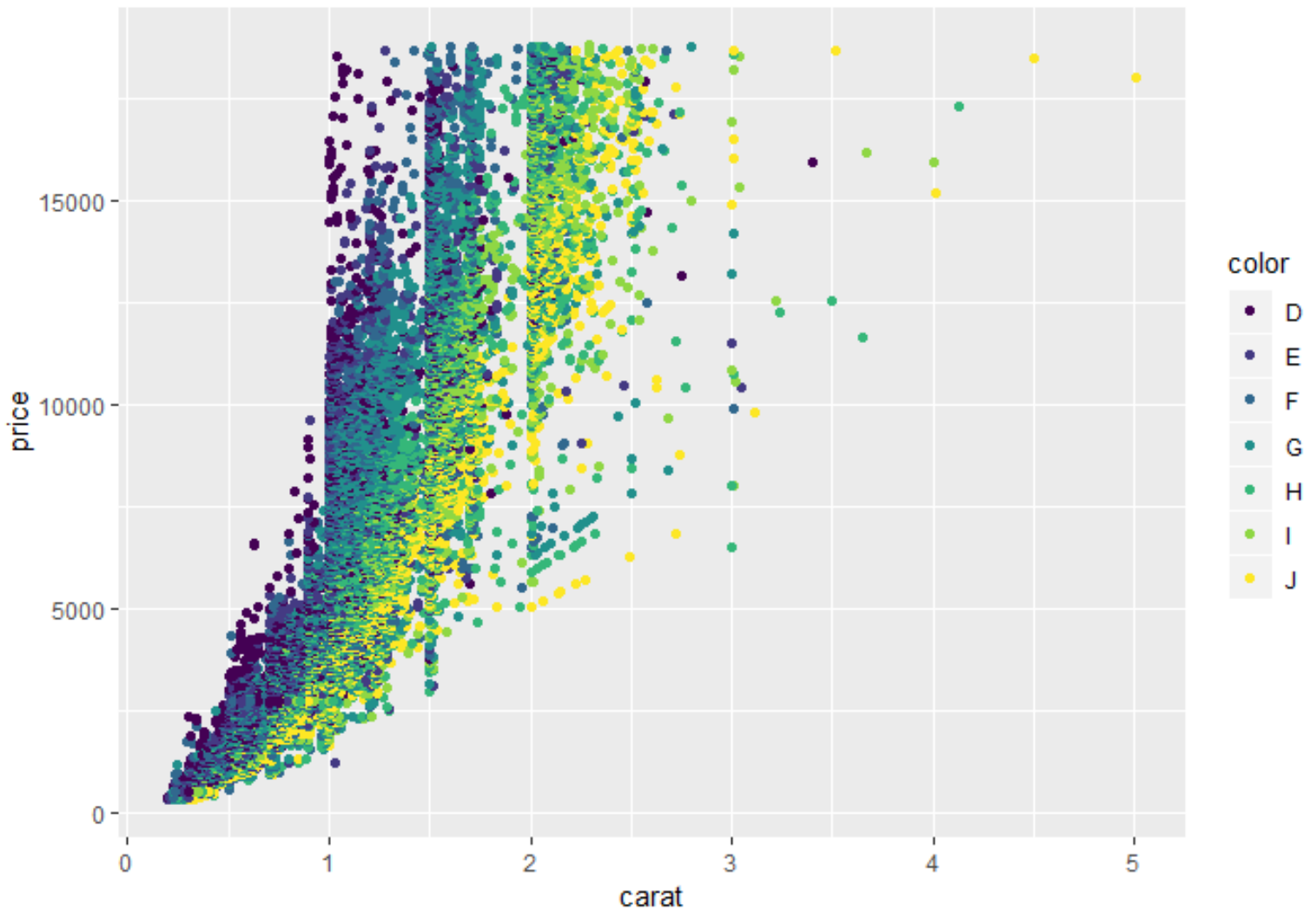
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`qplot(carat, price, data= diamonds, colour=color)`

➔ color attribute is used to fill as a color. Like 7 different colors are being represented here.

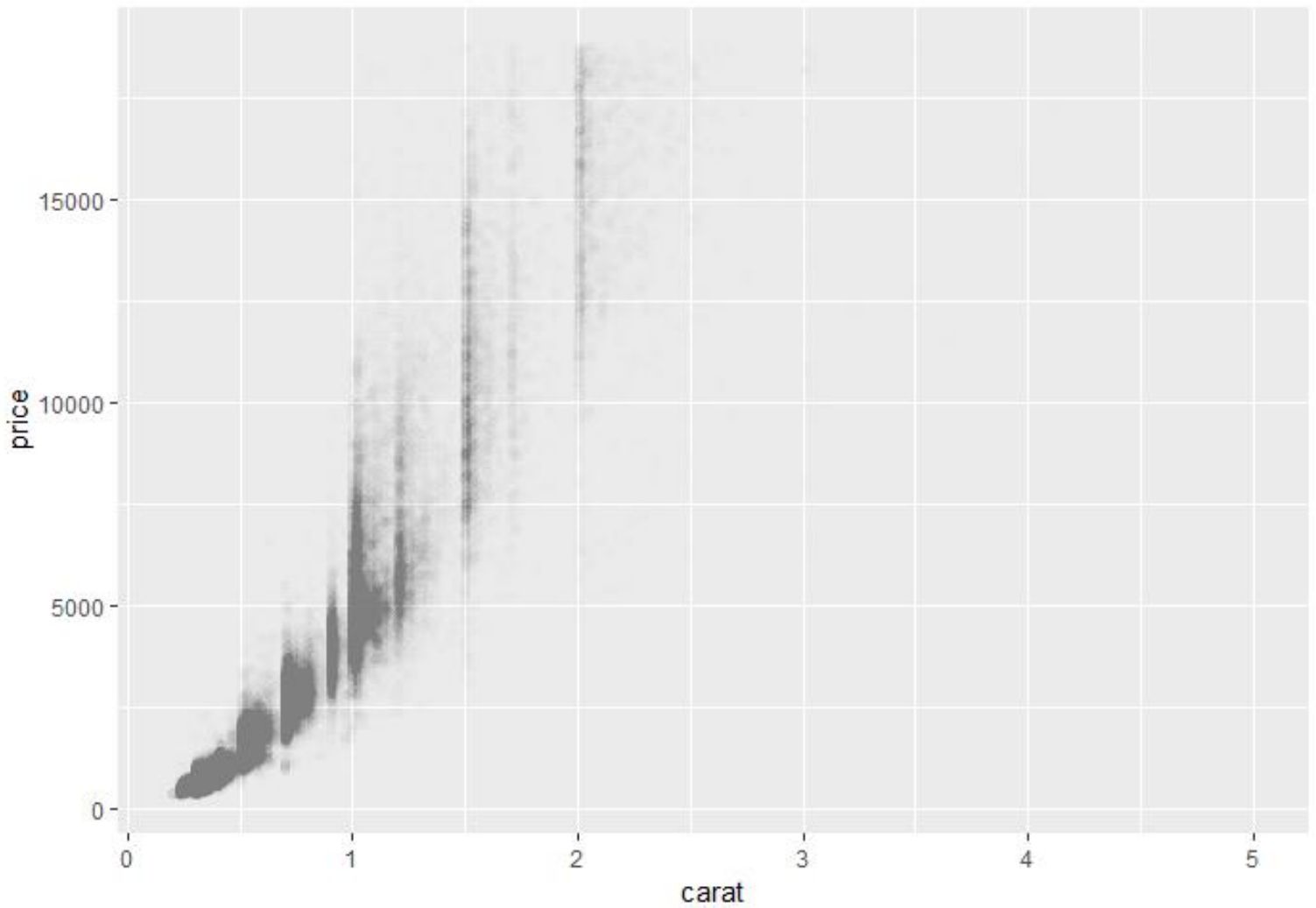
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```
qplot(carat, price, data= diamonds, alpha=l(1/510))
```

- ➔ Data visualised has several data points in a certain region. So to understand the number of those points, we use alpha which helps to set transparency which tells where the data points are dense.

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```
qplot(carat, price, data = diamonds, geom =  
c("point", "smooth", "boxplot"), colour = color, shape = cut)
```

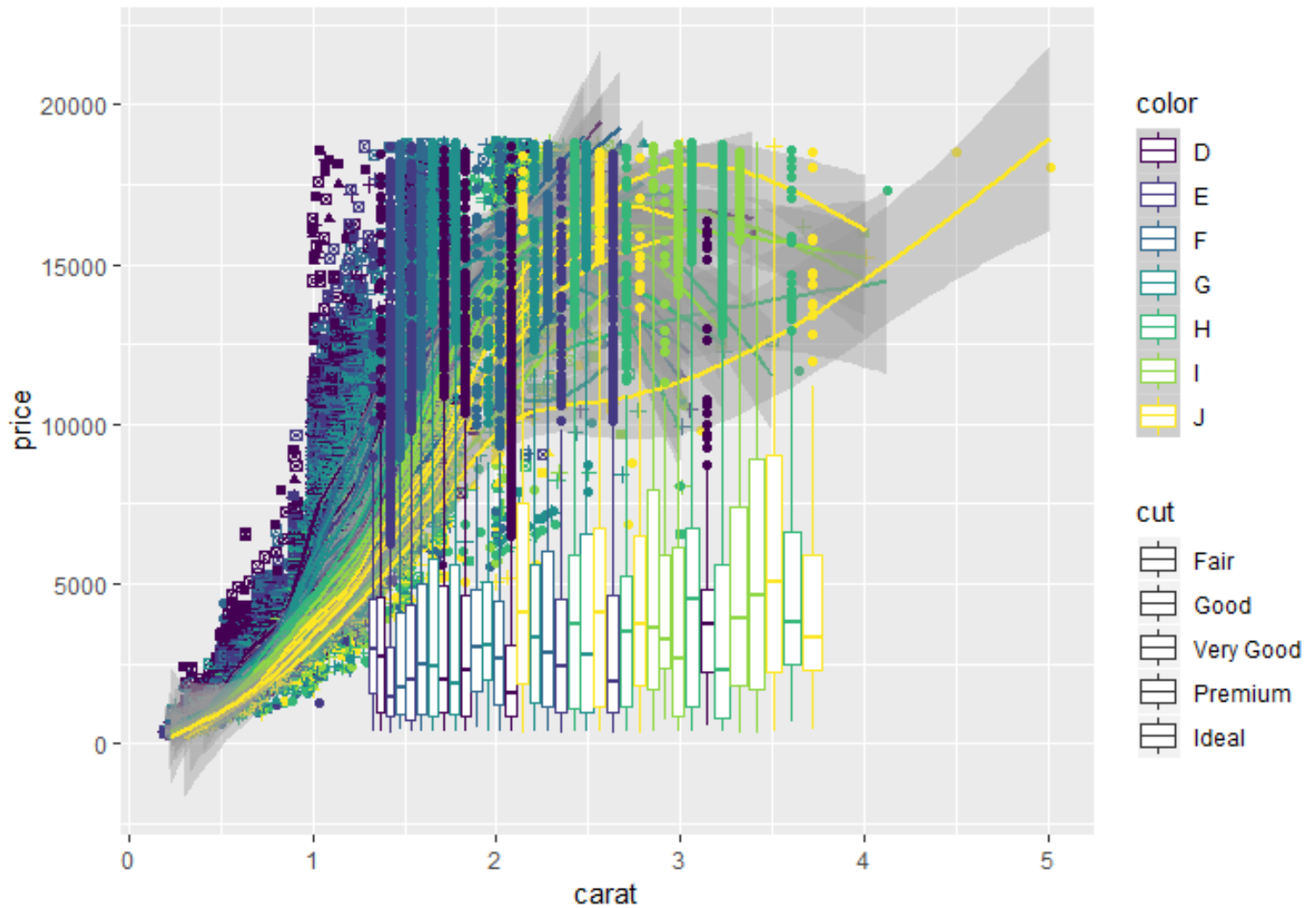
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→ smooth is used to see the relation. grey part is relation between carat and price



```
qplot(carat, price, data = diamonds, geom = c("point", "smooth"), se=FALSE, colour=color)
```

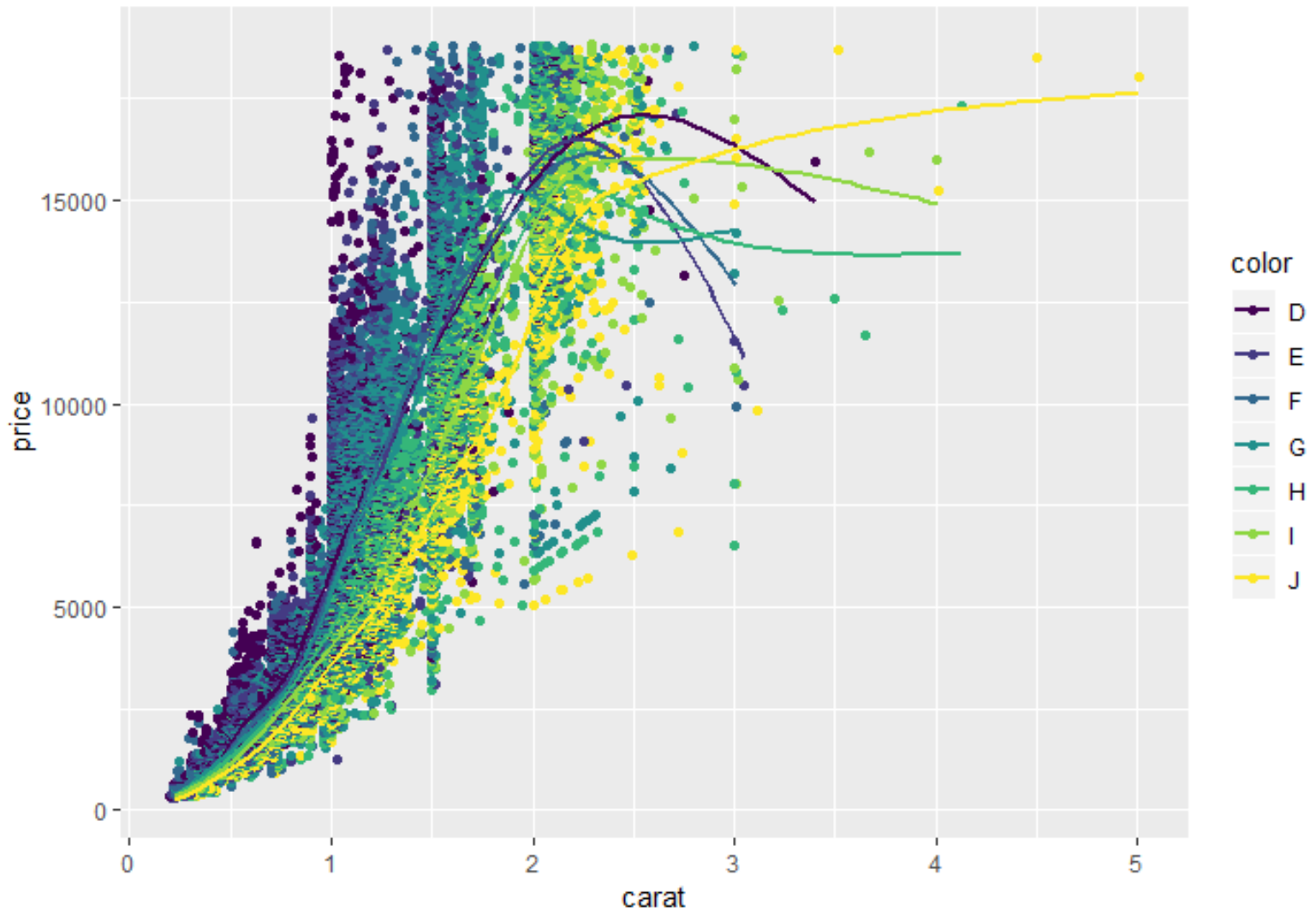
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→ Gives the curves showing the relation between carat and prices and distribution according to the colors.





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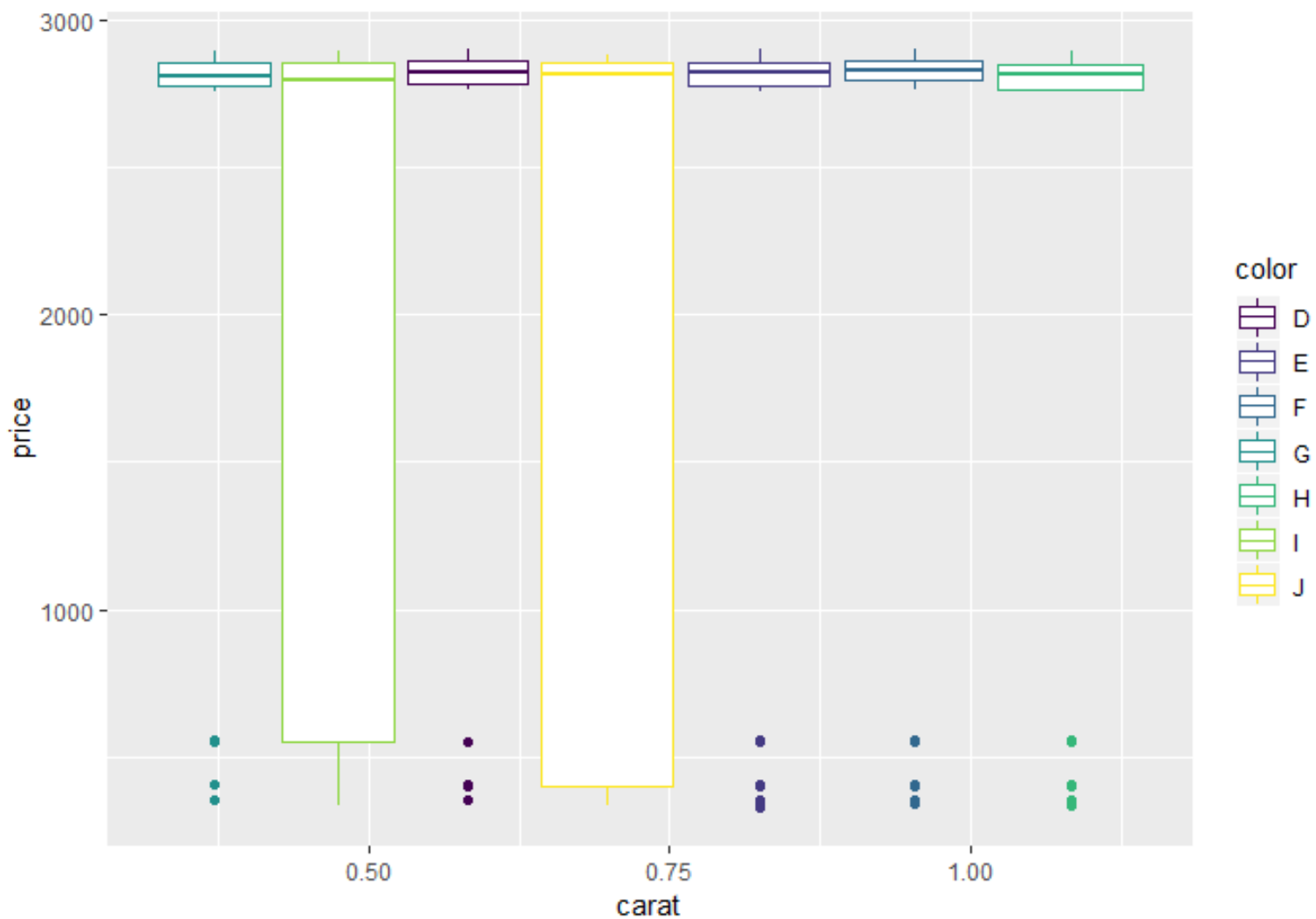
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smalldataset= diamonds[1:999,0:10]

➔ We slice the dataset to get the first 1000 rows with attributes stored in 20 columns.

```
qplot(carat, price, data = smalldataset, geom = c("point", "boxplot"), span=1, colour=color)
```

➔ Used to visualise boxplot for the data. Shows the mean, quantiles and outlines of the data. Here we use the sliced dataset.



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```
qplot(color, price/carat, data = diamonds, geom = c("boxplot"))
```

➔ Boxplot used to see the whole dataset.

