Statistical Inference Course Project Part 2

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```
# loading the required libraries
library(ggplot2)
library(dplyr)
```

Basic Inferential Data Analysis

1. Overview

In this analysis, the ToothGrowth data will be analyzed, which can be found in the R `datasets` package. This data set contains data on the effects of Vitamin C on the growth of teeth in guinea pigs. Two vitamin C supplements are used, with varying dose levels.

2. Loading the Dataset and performing EDA

The ToothGrowth data set has to be loaded from the `datasets` package in R.

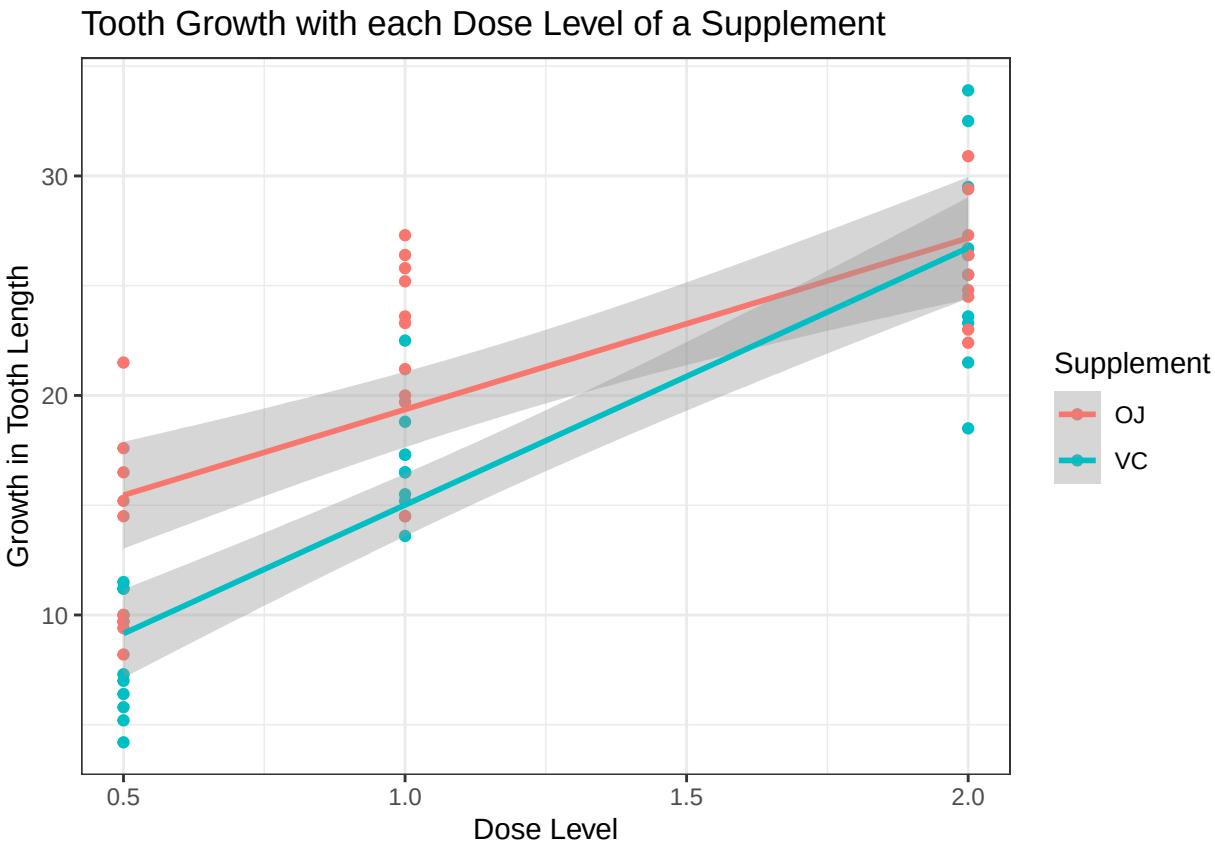
```
# loading the datasets package
library(datasets)

# loading the ToothGrowth data set
data("ToothGrowth")
```

Next, a plot will be created showing the trends in tooth-growth with respect to each supplement

```
# creating a point plot of the variation of teeth growth with respect to each dose level
# of a supplement, and fitting a linear line over those points
qplot(x = dose, y = len, data = ToothGrowth, color = supp, geom = "point",
      main = "Tooth Growth with each Dose Level of a Supplement",
      xlab = "Dose Level", ylab = "Growth in Tooth Length") +
geom_smooth(method = "lm") + theme_bw() + labs(colour = "Supplement")
```

```
## `geom_smooth()` using formula 'y ~ x'
```


Tooth Growth with each Dose Level of a Supplement
Growth in Tooth Length
30
20
10
0.5
1.0
1.5
2.0
Dose Level
Supplement
OJ
VC