Boxplots

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To create a boxplot and customize it in R using the AirPassengers data, follow these steps:

Load the AirPassengers data by typing the following command in R. This dataset needs to be converted into a data frame as it is not originally a data frame.

```
# load the tidyverse library and the AirPassengers dataset
library(tidyverse)

## -- Attaching packages ---------------------------------- tidyverse
1.3.1 --

## v ggplot2 3.3.5      v purrr   0.3.4
## v tibble  3.1.6      v dplyr   1.0.8
## v tidyr   1.2.0      v stringr 1.4.0
## v readr   2.1.2      v forcats 0.5.1


## -- Conflicts -------------------------------------------
tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()

data("AirPassengers")

data = data.frame(AirPassengers)
# create a basic boxplot with ggplot2
ggplot(data, aes(x = "", y = AirPassengers)) +
  geom_boxplot() +
  labs(title = "Boxplot of AirPassengers Dataset", x = "", y = "Number of
Passengers")

## Don't know how to automatically pick scale for object of type ts.
Defaulting to continuous.
```
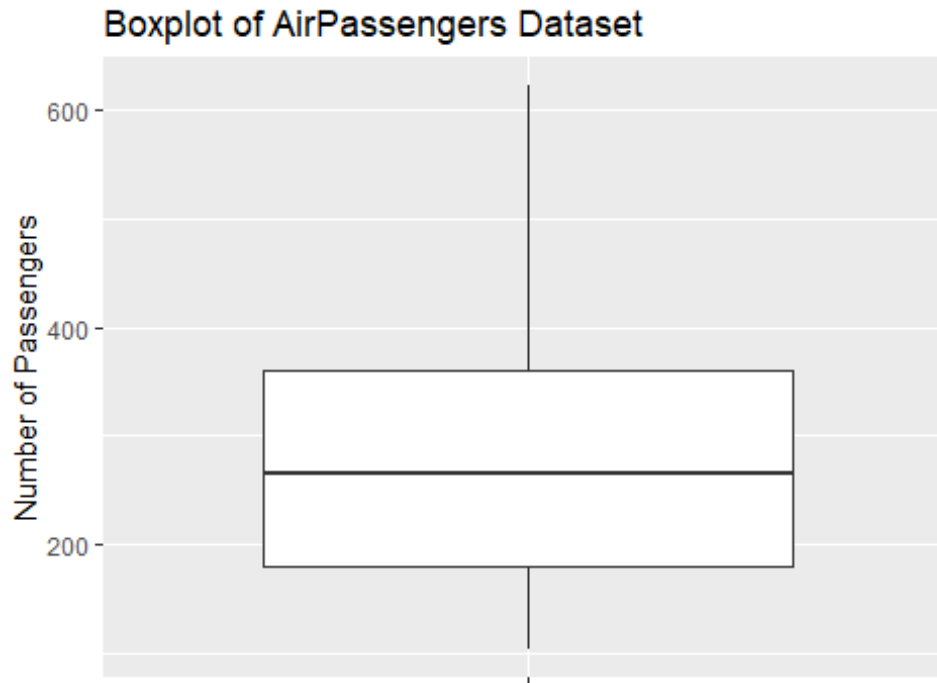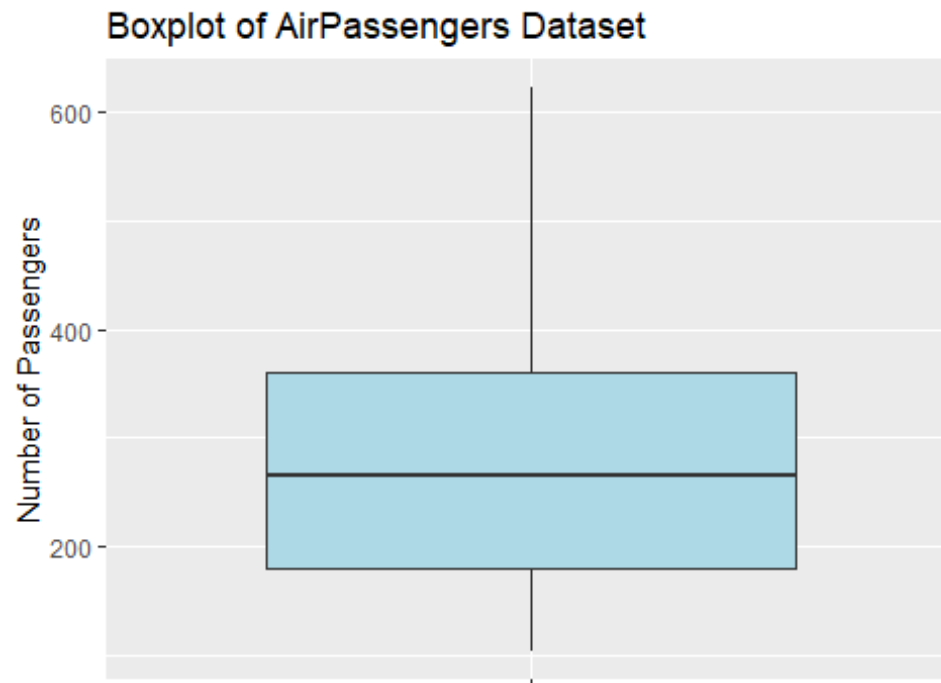
Boxplot of AirPassengers Dataset

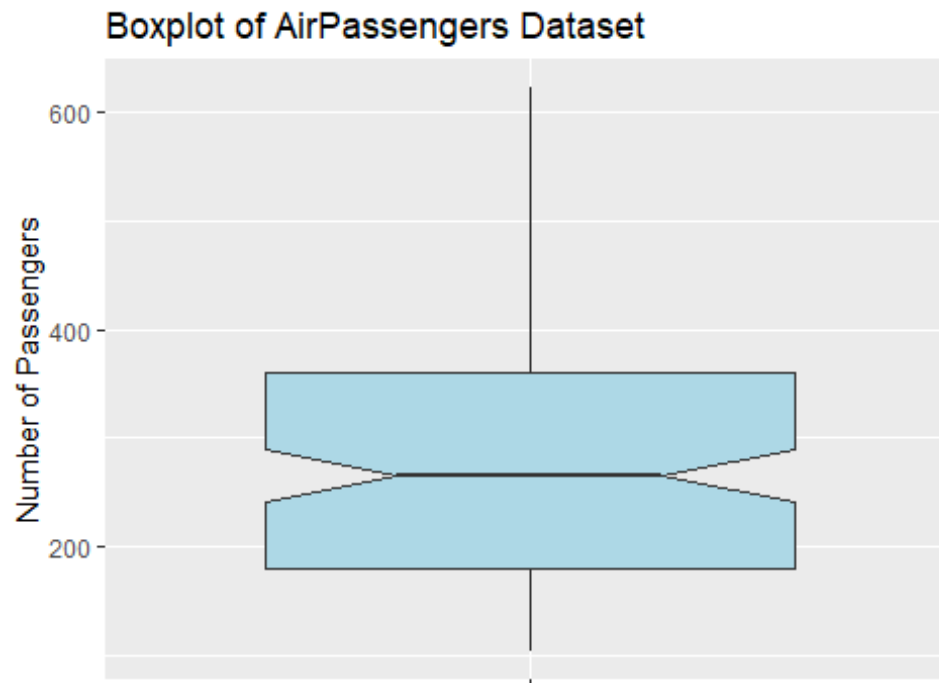Here are some ways to customize the boxplot:

```r
# change the fill color of the boxplot
ggplot(data, aes(x = "", y = AirPassengers)) +
  geom_boxplot(fill = "lightblue") +
  labs(title = "Boxplot of AirPassengers Dataset", x = "", y = "Number of
Passengers")

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```

Boxplot of AirPassengers Dataset


```r
# add notches to the boxplot to show confidence interval around the median
ggplot(data, aes(x = "", y = AirPassengers)) +
  geom_boxplot(notch = TRUE, fill = "lightblue") +
  labs(title = "Boxplot of AirPassengers Dataset", x = "", y = "Number of
Passengers")
```

```
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```

Boxplot of AirPassengers Dataset

```r
# customize the x-axis labels
ggplot(data, aes(x = "", y = AirPassengers)) +
  geom_boxplot(fill = "lightblue") +
  labs(title = "Boxplot of AirPassengers Dataset", x = "", y = "Number of
Passengers") +
  scale_x_discrete(labels = "Passenger Count")

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Defaulting to continuous.
```

Boxplot of AirPassengers Dataset