HW3 (Final)

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2024-11-07

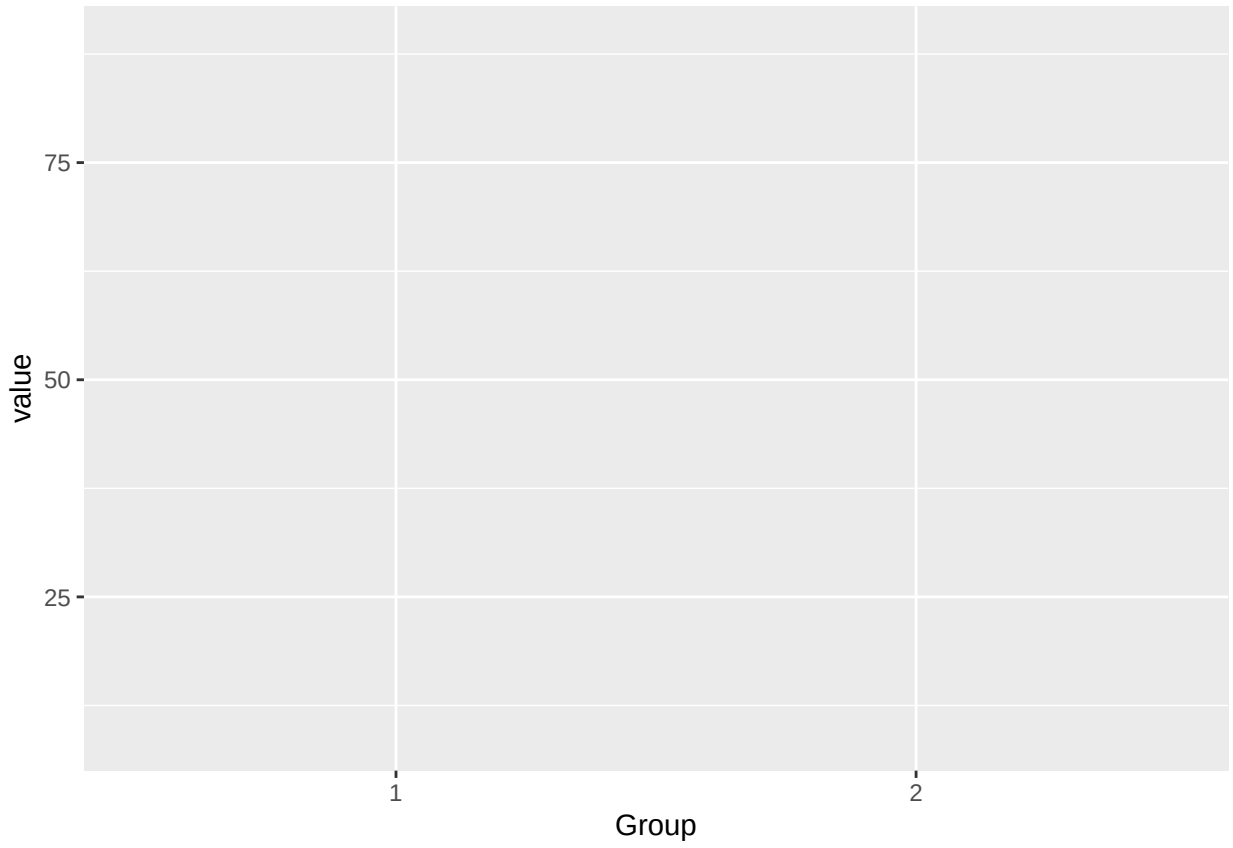
```
setwd("/cloud/project")

install.packages("reshape")
library(reshape)

install.packages("readxl")
#this package is needed to read in an .xlsx file
library(readxl)
#loading the package and its dependencies

TM <- read.csv("TextMessages.csv")
#importing the csv data file and referencing it as an object called TM

long_data <- melt(TM, id.vars= c("Participant","Group"), variable.name =
                    "variable", value.name="Value")

nrow(long_data)
```

```
## [1] 100
```

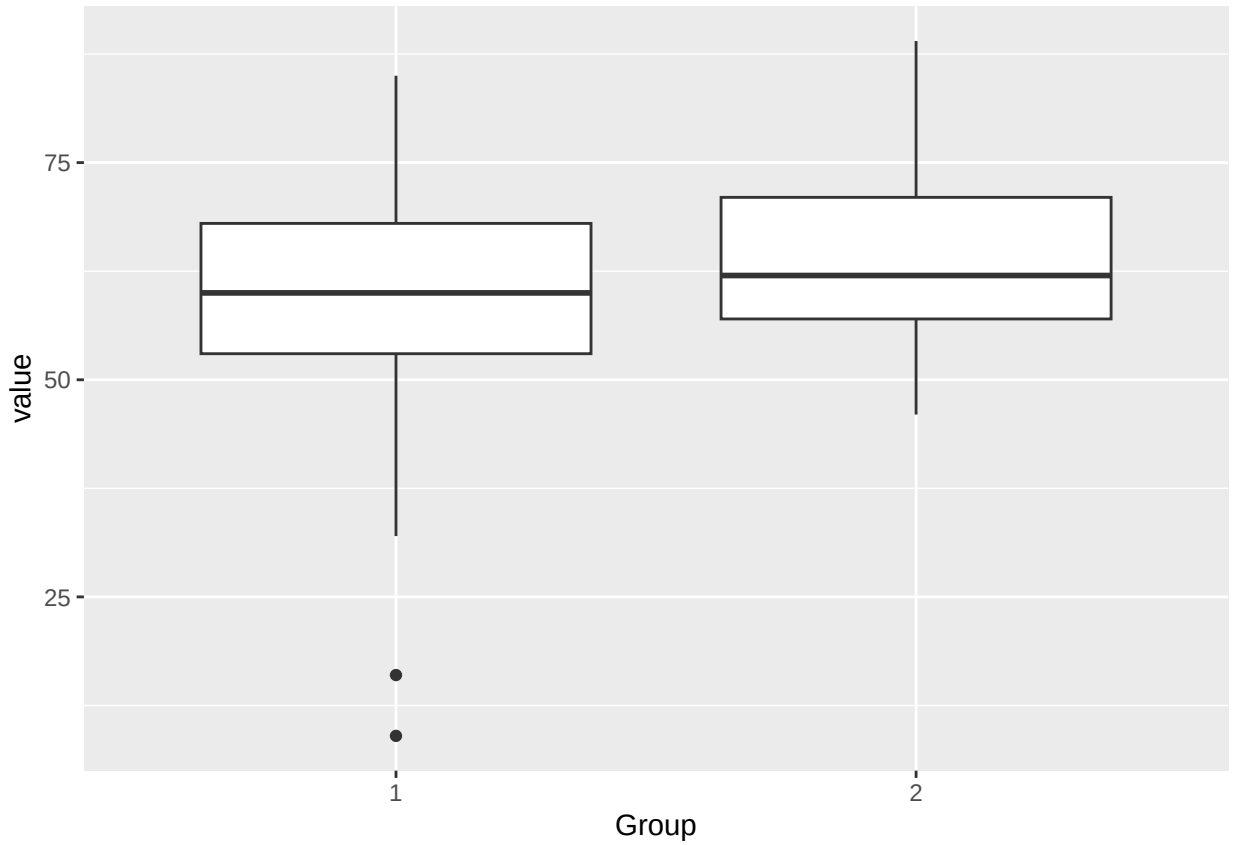
```
#100 rows

install.packages("ggplot2")
library(ggplot2)

long_data$Group <- as.factor(long_data$Group)

is.factor(long_data$Group)
```

```
## [1] TRUE
```

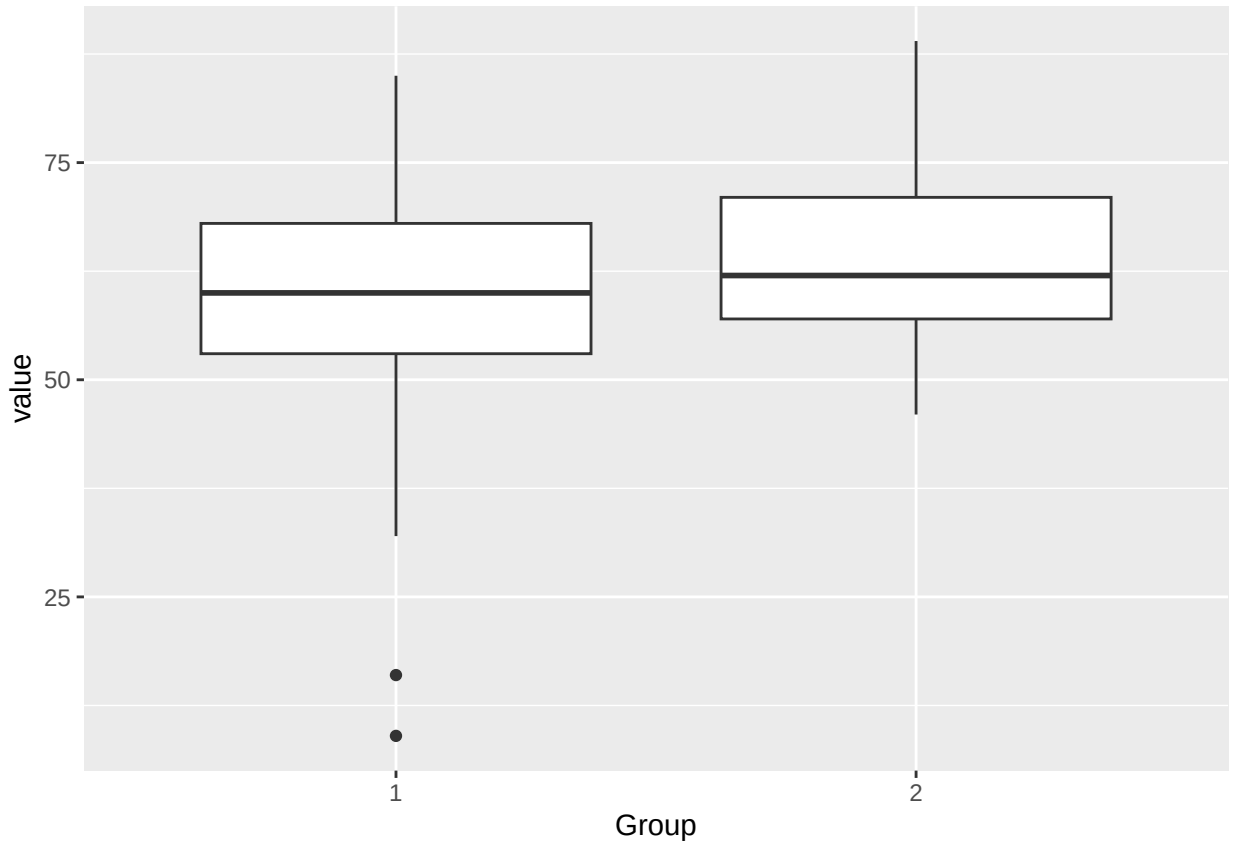
```
boxplot_TMbyGroup <- ggplot(long_data, aes(Group,value))

boxplot_TMbyGroup
```




```
boxplot_TMbyGroup + geom_boxplot()
```




```
boxplot_TMbyGroup + geom_boxplot() + labs(x="Group", y="value")
```



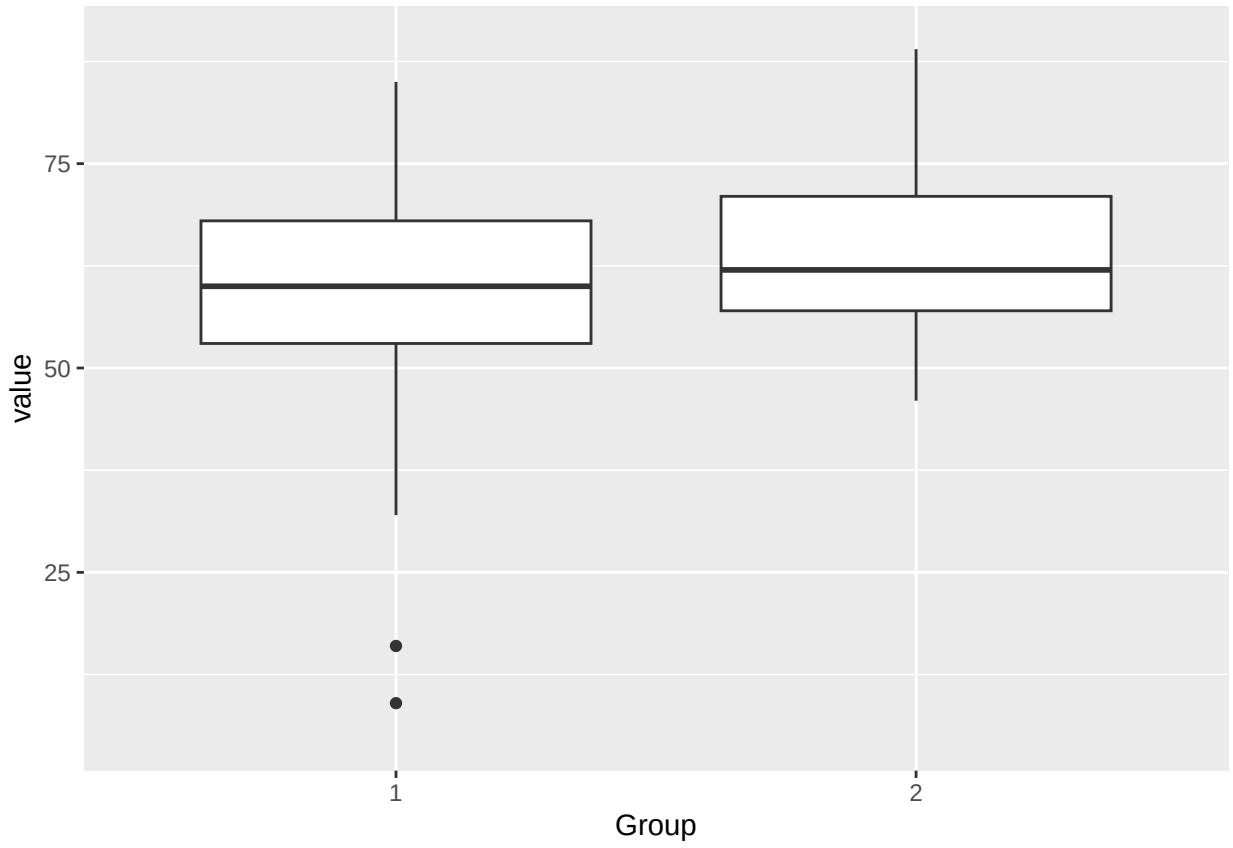

```
min(long_data$value)
```

```
## [1] 9
```

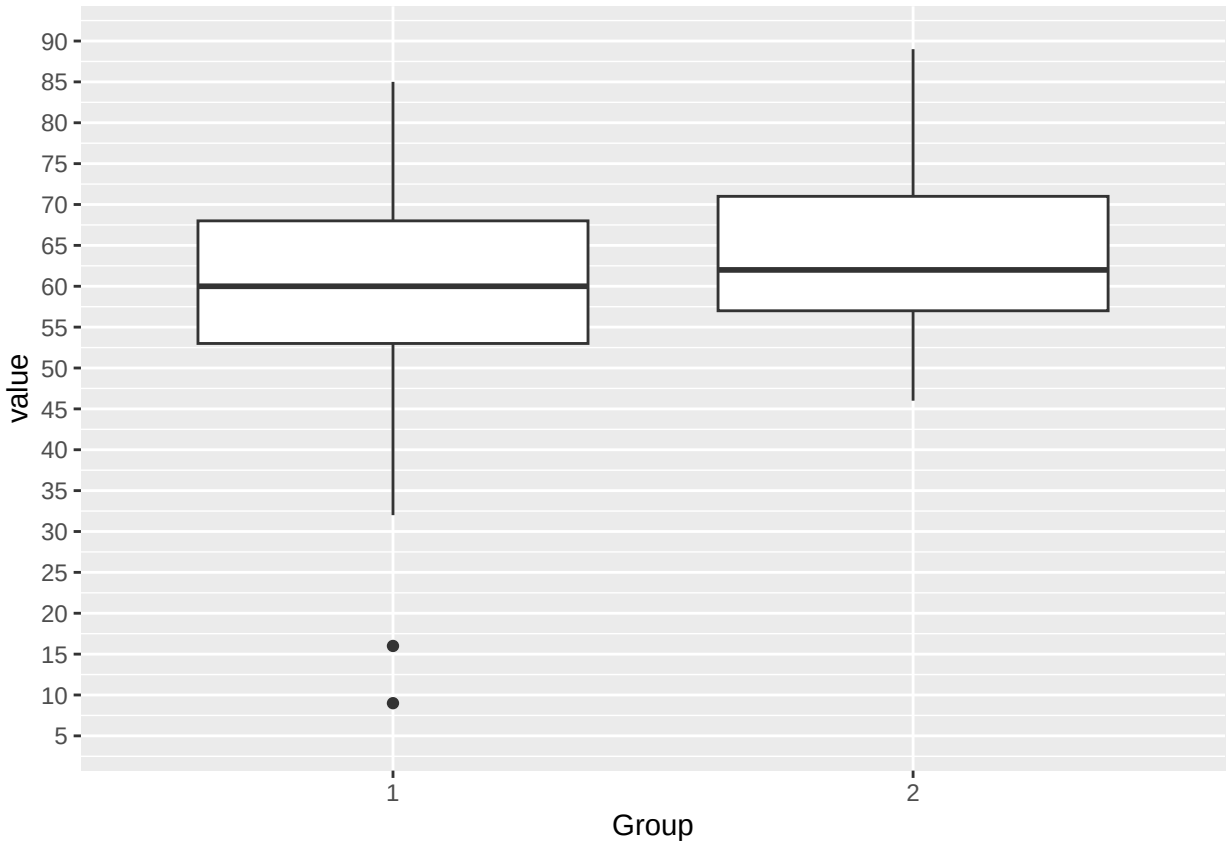
```
#min is 9

max(long_data$value)
```

```
## [1] 89
```

```
#max is 89

boxplot_TMbyGroup + geom_boxplot() + labs(x="Group", y="value")+ scale_y_continuous(limits = c(5, 90))
```




```
boxplot_TMbyGroup + geom_boxplot() + labs(x="Group", y="value")+ scale_y_continuous(limits = c(5, 90), b
```




```
#Group 1 has 2 outliers

install.packages("pastecs")

library(pastecs)

colnames(TM)
```

```
## [1] "Group"       "Baseline"    "Six_months"  "Participant"
```

```
by(long_data$value, long_data$Group, median)
```

```
## long_data$Group: 1
## [1] 60
## ------------------------------------------------------------
## long_data$Group: 2
## [1] 62
```

```
#Group 1 = 60; Group 2 = 62

by(long_data$value, long_data$Group, range)
```

```
## long_data$Group: 1
## [1]  9 85
## ------------------------------------------------------------
## long_data$Group: 2
## [1] 46 89
```

```r
#Group 1 = 9-85; Group 2 = 46-89

by(long_data$value, long_data$Group, quantile)
```

```
## long_data$Group: 1
##   0%  25%  50%  75% 100%
##    9   53   60   68   85
## ------------------------------------------------------------
## long_data$Group: 2
##   0%  25%  50%  75% 100%
##   46   57   62   71   89
```

```r
# (Group - 1) 0% = 9  25% = 53  50% = 60  75% = 68 100% = 85; (Group - 2) 0% = 46  25% = 57  50% = 62
```