

# Homework1.Rmd

2024-10-10

## Needed Packagaes

```
install.packages("ggplot2")
```

```
library(ggplot2)
```

## Task 1 - Data Frame

(Load the mpg dataset as a Data Frame)

```
data(mpg) df <- as.data.frame(mpg)
```

## Check the Data Frame

```
head(df)
```

## Task 2 - Categorical variables (Frequency tables, bar charts, pie chart)

Create a frequency table for the 'drv' variable

```
freq_table <- as.data.frame(table(mpg$drv))
```

## Calculate relative frequency and percentage

```
freq_table$rel_Freq <- round(freq_table$Freq / sum(freq_table$Freq), 2)
freq_table$Percentage <- round(freq_table$rel_Freq * 100, 2)
```

## Rename the columns for clarity

```
colnames(freq_table) <- c("drv", "Freq", "rel_Freq", "Percentage")
```

## Print the frequency table

```
print(freq_table)
```

## Create a bar chart for the 'drv' variable with custom colors

```
ggplot(freq_table, aes(x = drv, y = Freq, fill = drv)) + geom_bar(stat = "identity")
```