

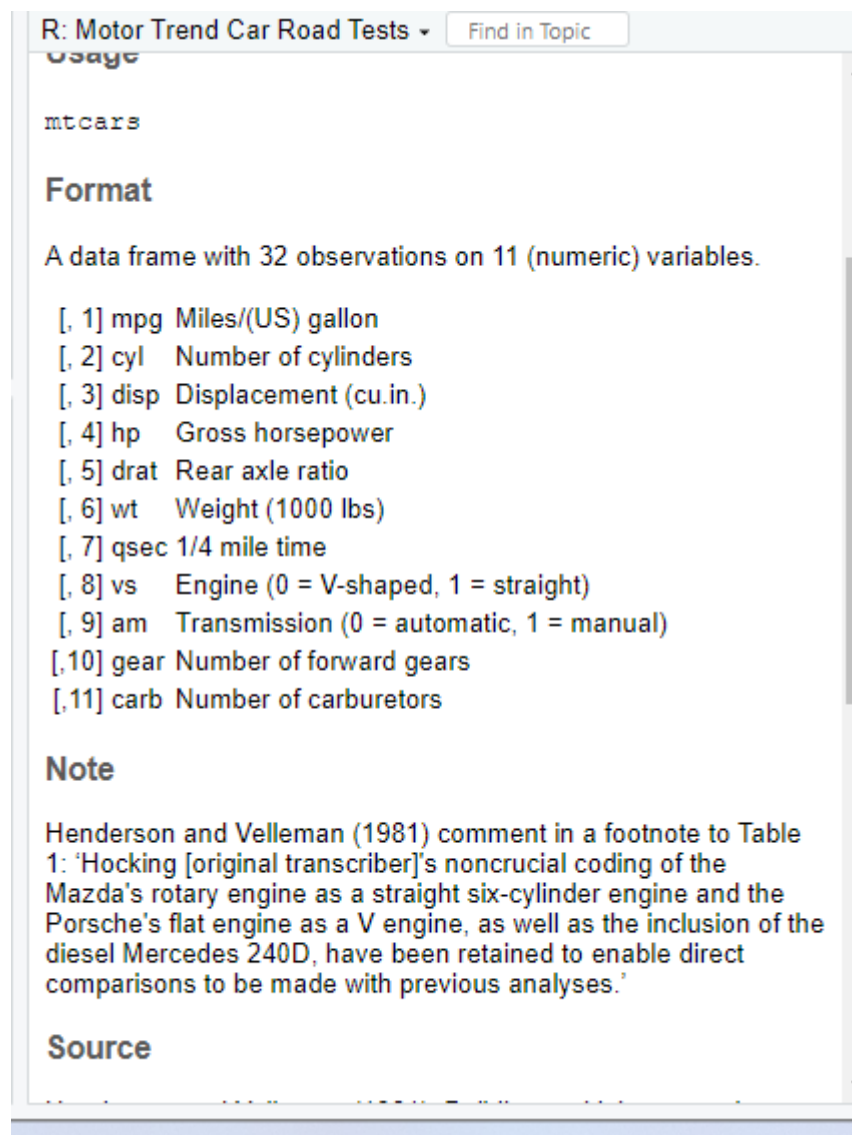
This lesson teaches how to use R to create the bar chart.

Step 1: Load the dataset.

```
print("Load the datasets package")  
library(datasets)
```

Step 2: Explore the mtcars dataset

```
print("getting the documents of mtcars dataset with ?")  
?mtcars
```



The screenshot shows the R help page for the 'mtcars' dataset. At the top, there is a title bar 'R: Motor Trend Car Road Tests' with a 'Find in Topic' button. Below the title, the word 'Usage' is followed by the code 'mtcars'. The 'Format' section describes it as 'A data frame with 32 observations on 11 (numeric) variables.' and lists the variables: mpg (Miles/(US) gallon), cyl (Number of cylinders), disp (Displacement (cu.in.)), hp (Gross horsepower), drat (Rear axle ratio), wt (Weight (1000 lbs)), qsec (1/4 mile time), vs (Engine (0 = V-shaped, 1 = straight)), am (Transmission (0 = automatic, 1 = manual)), gear (Number of forward gears), and carb (Number of carburetors). The 'Note' section contains a citation: 'Henderson and Velleman (1981) comment in a footnote to Table 1: 'Hocking [original transcriber]'s noncrucial coding of the Mazda's rotary engine as a straight six-cylinder engine and the Porsche's flat engine as a V engine, as well as the inclusion of the diesel Mercedes 240D, have been retained to enable direct comparisons to be made with previous analyses.' The 'Source' section is partially visible at the bottom.

R: Motor Trend Car Road Tests Find in Topic

Usage

```
mtcars
```

Format

A data frame with 32 observations on 11 (numeric) variables.

- [, 1] mpg Miles/(US) gallon
- [, 2] cyl Number of cylinders
- [, 3] disp Displacement (cu.in.)
- [, 4] hp Gross horsepower
- [, 5] drat Rear axle ratio
- [, 6] wt Weight (1000 lbs)
- [, 7] qsec 1/4 mile time
- [, 8] vs Engine (0 = V-shaped, 1 = straight)
- [, 9] am Transmission (0 = automatic, 1 = manual)
- [,10] gear Number of forward gears
- [,11] carb Number of carburetors

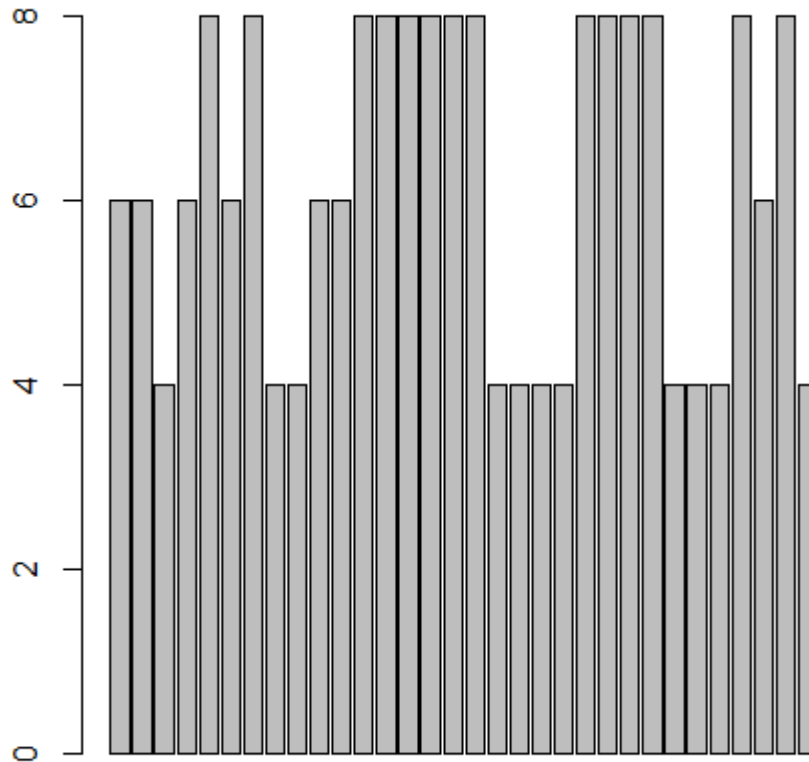
Note

Henderson and Velleman (1981) comment in a footnote to Table 1: 'Hocking [original transcriber]'s noncrucial coding of the Mazda's rotary engine as a straight six-cylinder engine and the Porsche's flat engine as a V engine, as well as the inclusion of the diesel Mercedes 240D, have been retained to enable direct comparisons to be made with previous analyses.'

Source

Step 3: Plot using the barplot function()

```
print("Use bar chart to visualize the cyl variable")  
barplot(mtcars$cyl)
```



Step 4: Create a frequency table to calculate the occurrence for each value

```
cylinder <- table(mtcars$cyl)  
print(cylinder)
```

```
 4  6  8  
11  7 14
```

Step 4: plot bar graph for frequency table

```
17 barplot(cylinder)  
18
```



Step 5:

```

!9
!10 # CLEAN UP #####
!11 print("Clear the environment")
!12 rm(list = ls())
!13
!14 print("detach the package")
!15 detach("package:datasets", unload = TRUE) # For base
!16
!17 print("Clear the plotted graph")
!18 dev.off() # But only if there IS a plot
!19
!20 print("Use control l to remove the console")
!21 cat("\014") # ctrl+l
!22
!23 # Clean mind :)

```

Will remove this the `rm(list = ls())`

=====

`dev.off()` will remove the graph.

=====

Clear control using control L

`cat("\014")` # ctrl+L