R Bar Plot – barplot() – 11 Examples

R Bar Plot (Bar Chart)

R Bar Plot (or Bar Chart, or Bar Graph) is used to represent values as bars in a graph. Bar graph is usually used to visually represent comparison of magnitudes over different categories, or a dimension (like time).

To draw a bar plot in R programming, use barplot() function. barplot() function is in R graphics package. marplot() function can draw vertical and horizontal bars on the plot.

In this tutorial, we will learn the syntax of barplot() function, and how to use barplot() function to draw bar plots, and how to style the bars of bar plot.

Syntax

The syntax of barplot() function is

```
barplot(height, width = 1, space = NULL,
        names.arg = NULL, legend.text = NULL, beside = FALSE,
        horiz = FALSE, density = NULL, angle = 45,
        col = NULL, border = par("fg"),
        main = NULL, sub = NULL, xlab = NULL, ylab = NULL,
        xlim = NULL, ylim = NULL, xpd = TRUE, log = "",
        axes = TRUE, axisnames = TRUE,
        cex.axis = par("cex.axis"), cex.names = par("cex.axis"),
        inside = TRUE, plot = TRUE, axis.lty = 0, offset = 0,
        add = FALSE, ann = !add && par("ann"), args.legend = NULL, ...)
```

or, we can also use the following syntax

```
barplot(formula, data, subset, na.action,
        horiz = FALSE, xlab = NULL, ylab = NULL, ...)
```

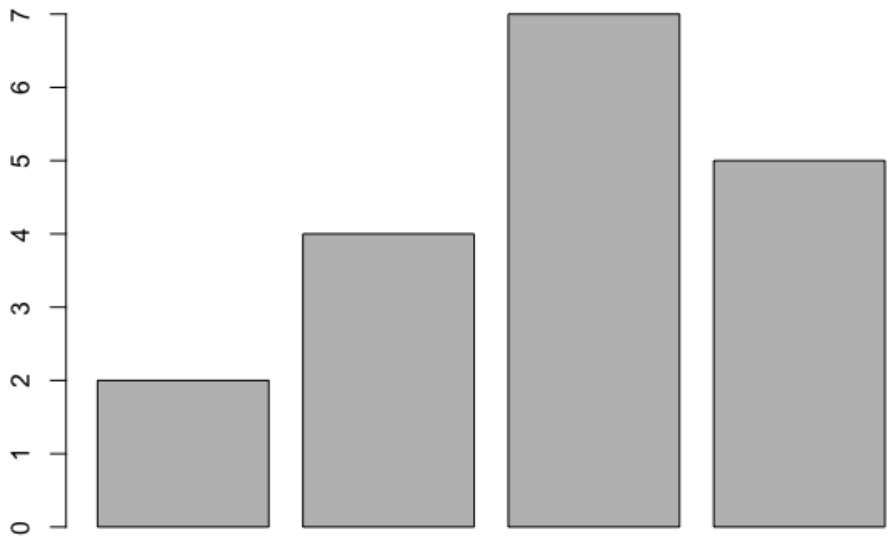
Example 1 – Simple Bar Plot

In the following program, we will draw a simple bar plot using barplot() function.

example.R

```
height <- c(2, 4, 7, 5)
barplot(height)
```

Output



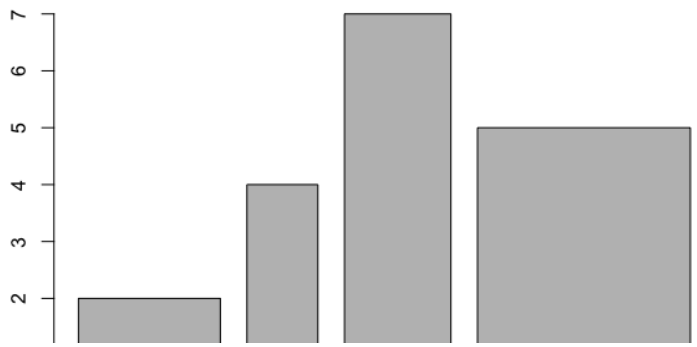
Example 2 – Bars with Specific Width

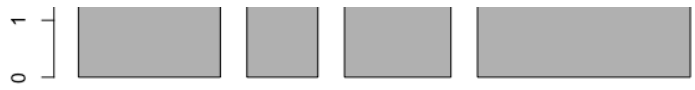
In the following program, we will draw a bar plot with each bar set to a specific width. Pass required width values as vector to the `width` parameter in barplot() function call.

example.R

```
height <- c(2, 4, 7, 5)
barwidth <- c(2, 1, 1.5, 3)
barplot(height, width = barwidth)
```

Output





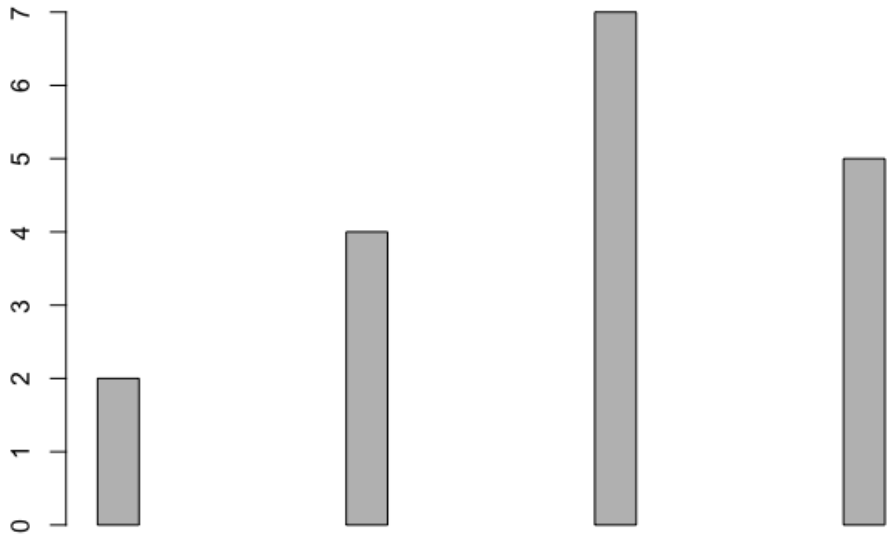
Example 3 – Space between Bars

In the following program, we will draw a bar plot with a specific space set between the bars. Pass required space value or pass a vector to the `space` parameter in barplot() function call.

example.R

```
height <- c(2, 4, 7, 5)
barplot(height, space = 5)
```

Output



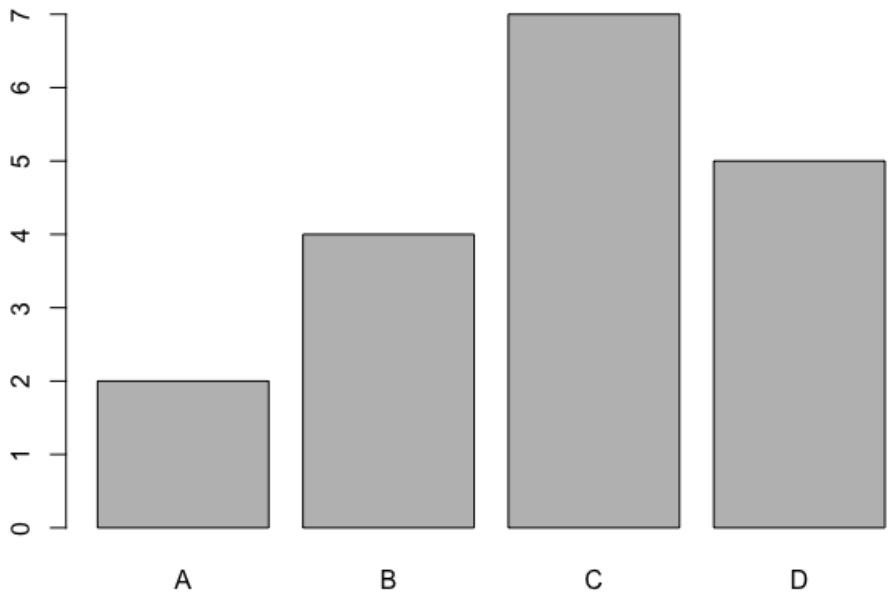
Example 4 – Names for Bars

In the following program, we will specify names for bars, which shall be drawn below the bar in the bar plot. Pass required names value or a vector to the `names` parameter in barplot() function call.

example.R

```
height <- c(2, 4, 7, 5)
barplot(height, names = c("A", "B", "C", "D"))
```

Output



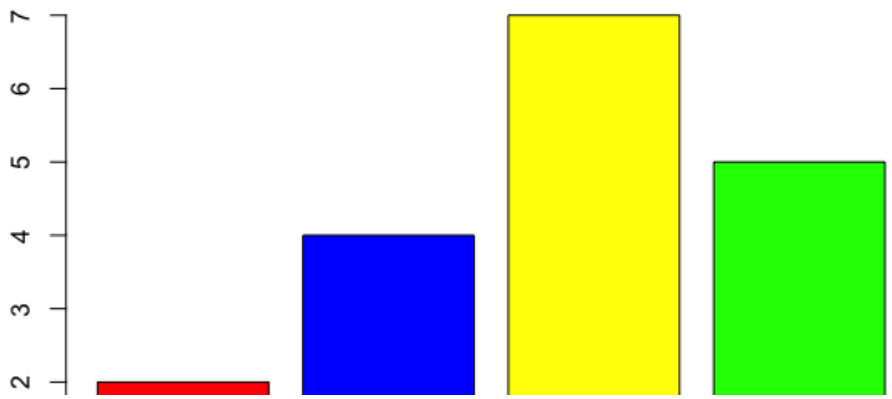
Example 5 – Bar Colors

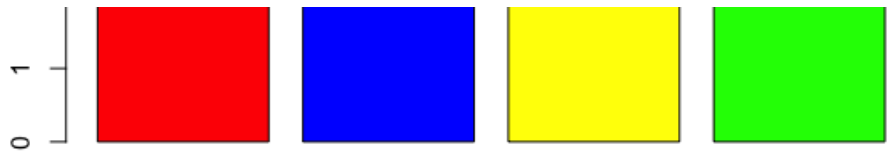
In the following program, we specify colors for bars. Pass required color value or a vector of colors to the `col` parameter in barplot() function call.

example.R

```
height <- c(2, 4, 7, 5)
barcolors <- c("red", "blue", "yellow", "green")
barplot(height, col = barcolors)
```

Output





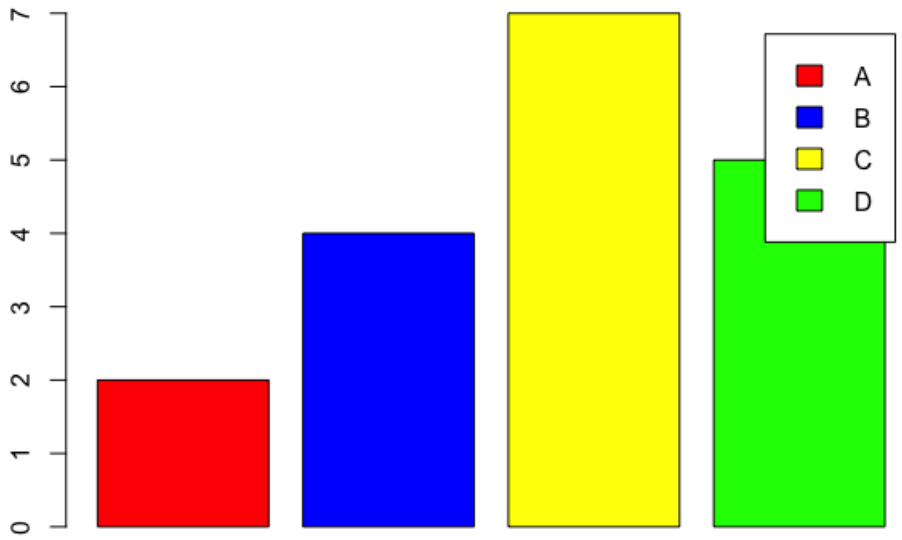
Example 6 – Legend for Bar Plot

In the following program, we specify legend for this barplot. Pass required legend text value or a vector to the `legend.text` parameter in barplot() function call.

example.R

```
height <- c(2, 4, 7, 5)
barcolors <- c("red", "blue", "yellow", "green")
barplot(height, col = barcolors, legend = c("A", "B", "C", "D"))
```

Output



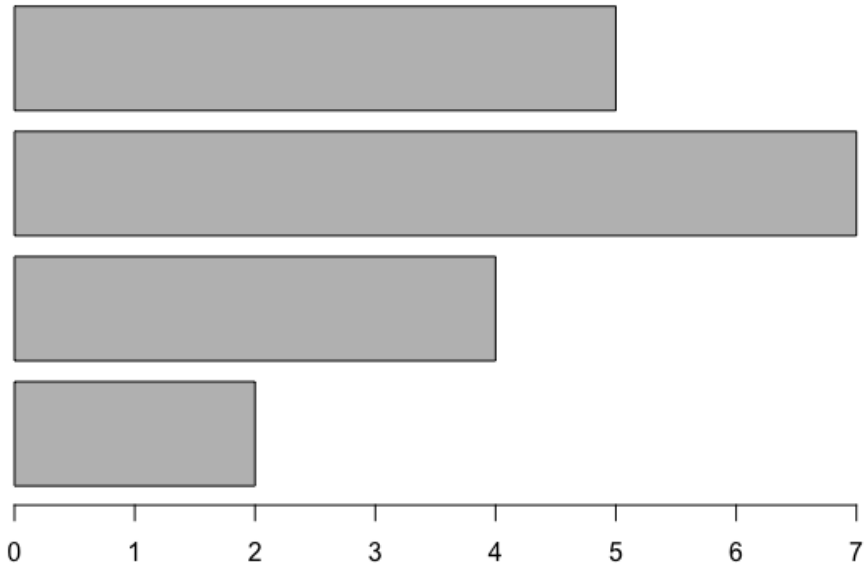
Example 7 – Horizontal Bar Plot

In the following program, we draw the bars horizontally in barplot. Pass the value of `TRUE` to the `horiz` parameter in barplot() function call.

example.R

```
height <- c(2, 4, 7, 5)
barplot(height, horiz = TRUE)
```

Output



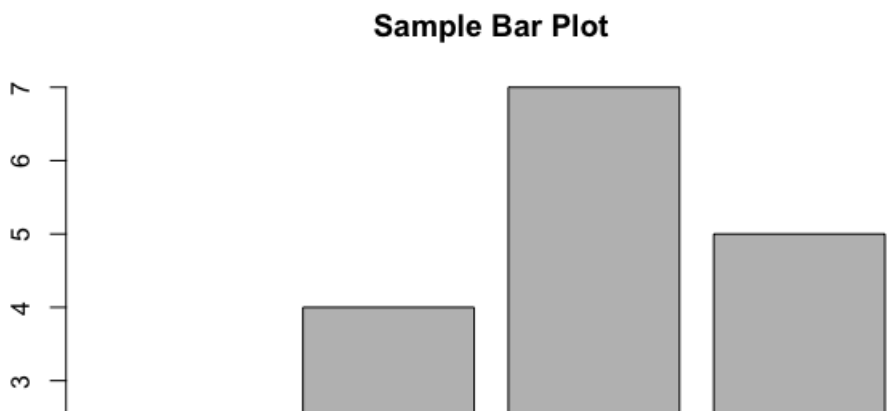
Example 8 – Main Title for Bar Plot

In the following program, we set the main title for barplot using `main` parameter of barplot() function.

example.R

```
height <- c(2, 4, 7, 5)
barplot(height, main = "Sample Bar Plot")
```

Output



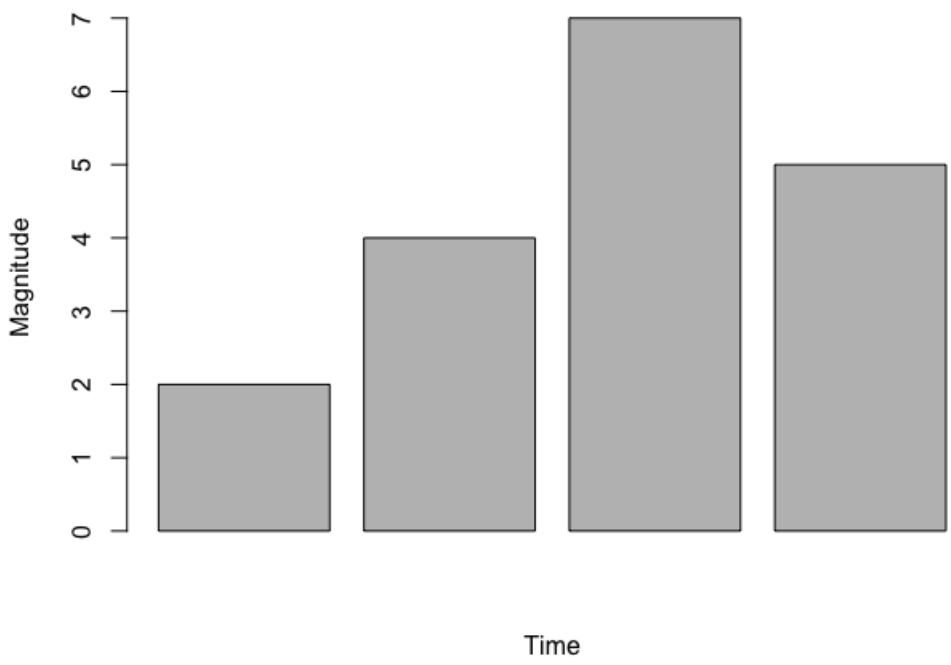
Example 9 – X, Y axes labels

In the following program, we set the X and Y axes labels for barplot using `xlab` and `ylab` parameters of barplot() function, respectively.

example.R

```
height <- c(2, 4, 7, 5)
barplot(height, xlab = "Time", ylab = "Magnitude")
```

Output



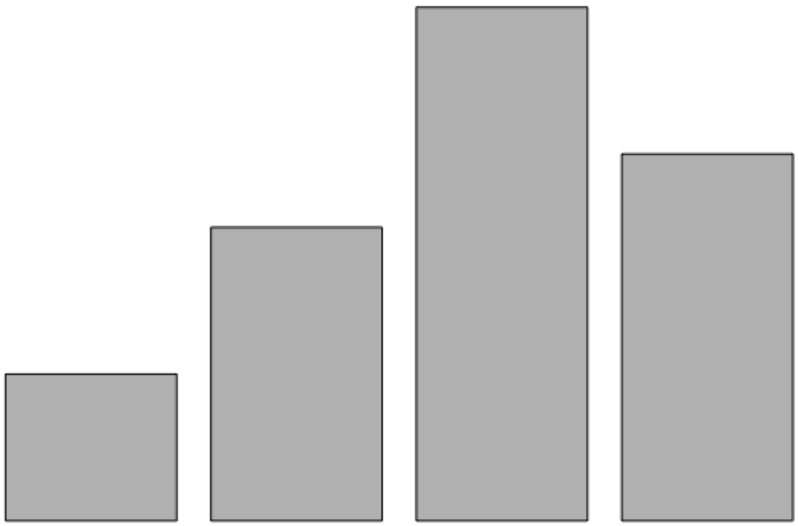
Example 10 – Bar Plot without Axes

In the following program, we will draw the bar plot without X and Y axes drawn to the plot using `axes` parameter of barplot() function.

example.R

```
height <- c(2, 4, 7, 5)
barplot(height, axes = FALSE)
```

Output



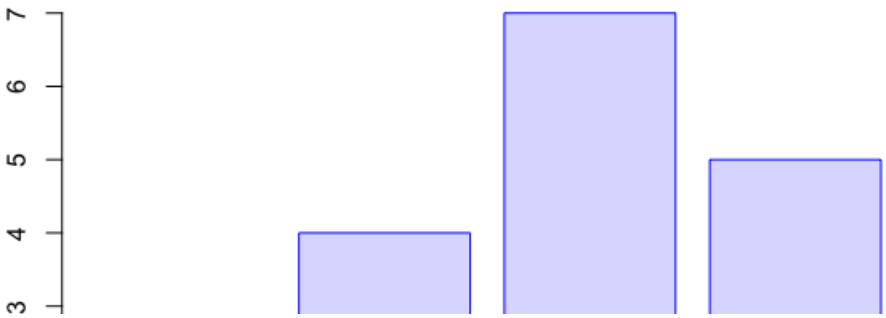
Example 11 – Border Color for Bars

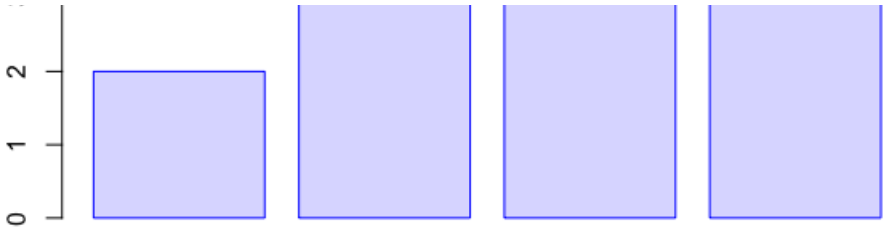
In the following program, we will set border color for the bars using `border` parameter of barplot() function.

example.R

```
height <- c(2, 4, 7, 5)
barplot(height, col = "#DDDDFF", border = "#0000FF")
```

Output





Conclusion

In this R Tutorial, we learned how to draw Bar Plots in R using barplot() function, with the help of examples.

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