

# barchart: Easy Bar Chart in L<sup>A</sup>T<sub>E</sub>X

Version 0.1.0

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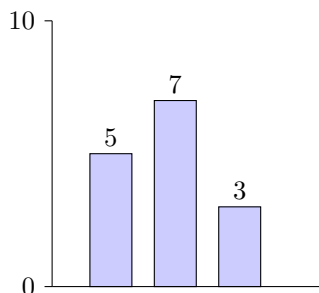
## 1 Introduction

`barchart` is a L<sup>A</sup>T<sub>E</sub>X package for creating simple and easy to use bar-chart. The package is heavily inspired by `bchart` by Tobias Kuhn. `barchart` provides an easy way to create vertical barcharts using Tikz.

## 2 Charts

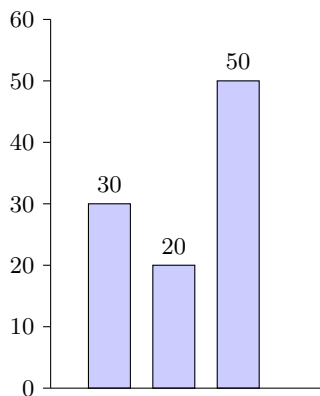
`barchart` comes with a variety of customization options for both the overall chart and for each individual bar. A simple chart can be done like this:

```
\begin{barchart}
  \barc{5}
  \barc{7}
  \barc{3}
\end{barchart}
```



The only arguments that are mandatory is the bar value. The charts can be changed using a few simple options such as `min`, `max` and `step`.

```
\begin{barchart}[min = 0, max = 60, step = 10, height=0.25em]
  \barc{30}
  \barc{20}
  \barc{50}
\end{barchart}
```

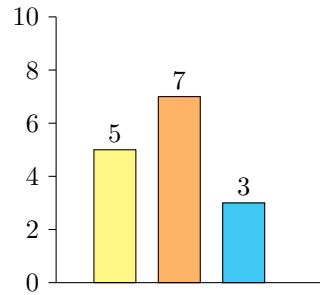


`height` is used to set the height of the whole chart. Omitting a height on charts with large `max` values will make the chart enormous.

### 3 Bars

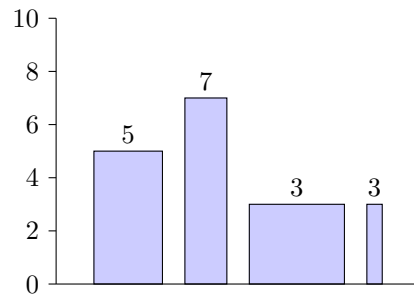
Each bar can be customized to your liking. This can be done using `color`, `width` and `plain`. `color` changes the color of each bar like:

```
\begin{barchart}[step = 2]
  \barc[color=yellow!60]{5}
  \barc[color=orange!60]{7}
  \barc[color=cyan!60]{3}
\end{barchart}
```



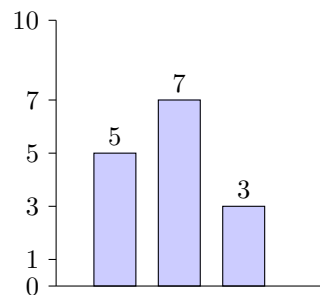
`width` changes the width of each bar:

```
\begin{barchart}[step = 2]
  \barc[width=40pt]{5}
  \barc[width=30pt]{7}
  \barc[width=50pt]{3}
  \barc[width=20pt]{3}
\end{barchart}
```



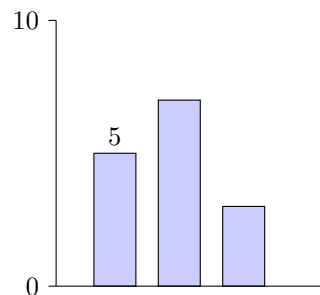
Using less than 20pt is not recommended. Instead of using pre-defined step as the examples have shown so far, `steps` can be used.

```
\begin{barchart}[steps = {1,3,5,7,10}]
  \barc{5}
  \barc{7}
  \barc{3}
\end{barchart}
```



`plain` is a boolean which can either be `true` or `false` and removes the label on the bar.

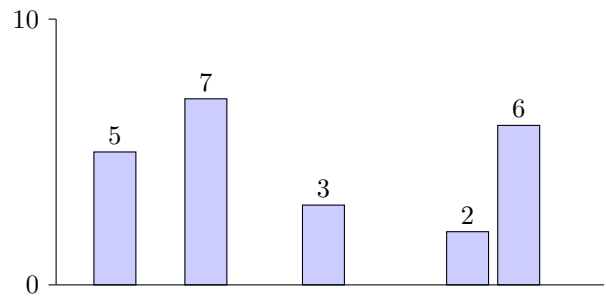
```
\begin{barchart}
  \barc{5}
  \barc[plain=true]{7}
  \barc[plain=true]{3}
\end{barchart}
```



## 4 Skips

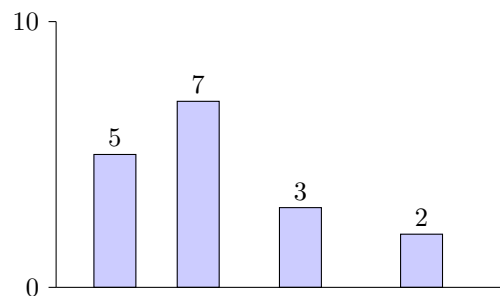
Between each bar a skip can be implemented to have more or less room. This is done using `\barcskip{}`.

```
\begin{barchart}
  \barc{5}
  \barcskip{10pt}
  \barc{7}
  \barcskip{20pt}
  \barc{3}
  \barcskip{30pt}
  \barc{2}
  \barcskip{-5pt}
  \barc{6}
\end{barchart}
```



The skips can either be made with positive or negative pt or using default skip sizes as `\smallskip`, `\medskip` and `\bigskip`.

```
\begin{barchart}
  \barc{5}
  \smallskip
  \barc{7}
  \medskip
  \barc{3}
  \bigskip
  \barc{2}
\end{barchart}
```

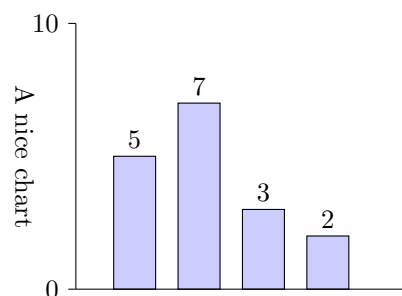


## 5 Labels

The package also include various ways of labeling the charts. Both the chart and its individual bars can be labeled.

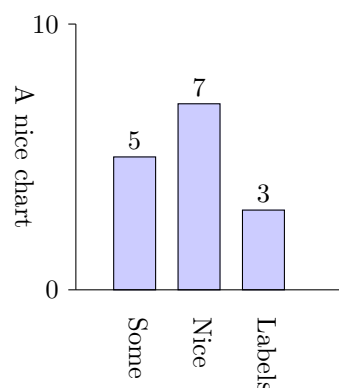
The chart can be labeled using:

```
\begin{barchart}[label= A nice chart]
  \barc{5}
  \barc{7}
  \barc{3}
  \barc{2}
\end{barchart}
```

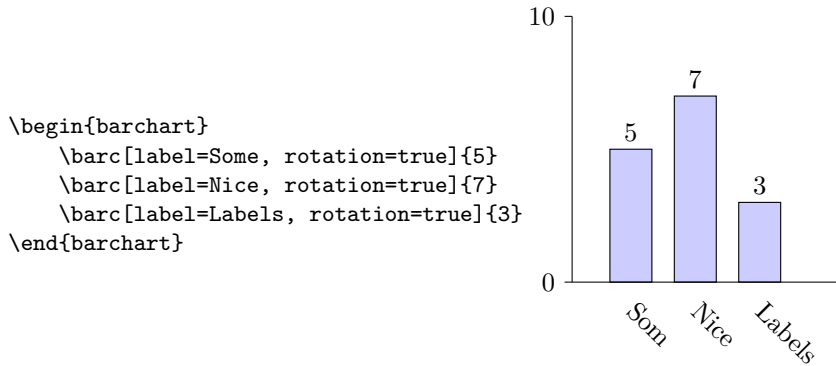


Each bar can also have their own label. These labels are positioned below the x-axis.

```
\begin{barchart}[label=A nice chart]
  \barc[label=Some]{5}
  \barc[label=Nice]{7}
  \barc[label=Labels]{3}
\end{barchart}
```

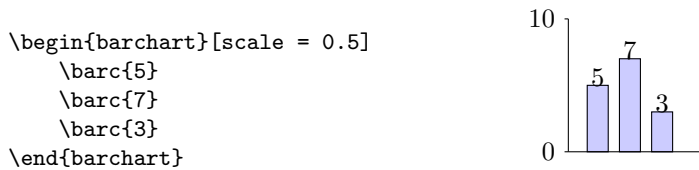


These labels can also be rotated, so they are easier to read using `rotation=true`.

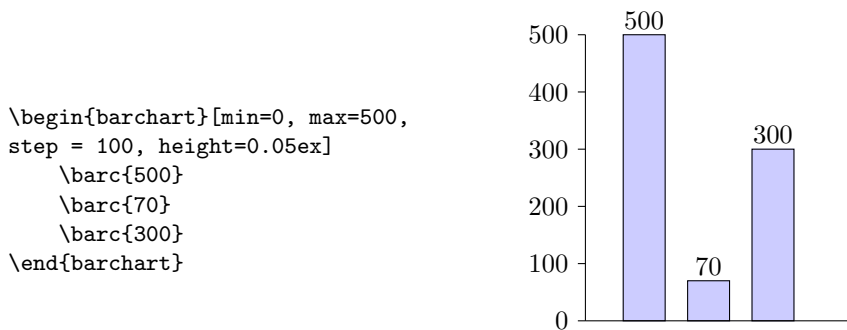


## 6 Scaling

If the charts become too big or small, it is possible to scale them using `scale`.



But sometimes it is not enough to just scale the chart. Using `height` it is possible to set a fixed height of the chart.



## 7 Known Issues

When using large values for each bar, it is important to set a fixed height like:

```

\begin{barchart}[label= A nice chart, min=0, max=100, height=0.2ex, step=20]
  \barc{50}
  \barc{70}
  \barc{30}
  \barc{20}
  \barc{50}
  \barc{70}
  \barc{30}
  \barc{20}
  \barc{50}
  \barc{70}
  \barc{30}
  \barc{20}
\end{barchart}

```

