Drawing Pie Chart by using \texttt{pgf-pie}

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Abstract

\texttt{pgf-pie} is a \LaTeX{} package for drawing pie chart (and variant charts). As stated by its name, it is based on a very popular graphic package \texttt{PGF/TikZ}. This document presents the usage of \texttt{pgf-pie} and collects some pie charts as examples. \texttt{pgf-pie} can be downloaded from http://code.google.com/p/pgf-pie/.

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1 Usage

1.1 First Pie

\texttt{\textbackslash pie} is the only command that provided by \texttt{pgf-pie}. The argument is a list of number and text combination in the formate of \texttt{number/text}, i.e. 10/A, 20/B, 30/C, 40/D. The result is shown in figure 1.

1.2 Position, Rotation, Size

The center of chart can be set by \texttt{pos}, default is \{0,0\}. The chart can be rotated by setting \texttt{rotate} (in degrees). The size of chart can be set by \texttt{radius}, default is 3.

\begin{tikzpicture}
\pie{10/, 20/, 30/, 40/}
\pie[pos={8,0}, rotate=180]{10/, 20/, 30/, 40/}
\pie[pos={17,0}, radius=4]{10/, 20/, 30/, 40/}
\end{tikzpicture}
1.3 Color

The color can be specified by `color`, the default color wheel is shown in figure 2.
1.4 Explode

\begin{tikzpicture}
% explode list
\pie[explode={0, 0, 0, 0.1}] {10/A, 20/B, 30/C, 40/D}
% explode all
\pie[pos={(8,0)}, explode=0.1] {10/A, 20/B, 30/C, 40/D}
\end{tikzpicture}

1.5 Angle of slices

The value of sum indicates the sum of all data in the chart, it is 100 by default. It can be calculated automatically when auto is set. Then the angle of slices are determined by number value and sum.

\begin{tikzpicture}
\pie[sum=auto, after number=, radius=2]{33/Boys, 7/Girls}
\pie[pos={(6,0)}, sum=40, after number=, radius=2]{33/Boys}
\end{tikzpicture}

1.6 Text

1.6.1 Number

Two parameters can be used to decorate number: before number and after number. Both are empty by default, but if sum=100, after number will be set to % automatically if user doesn’t set it.

\begin{tikzpicture}
\pie[before number={$}, after number=,]{10/A, 20/B, 30/C, 40/D}
\end{tikzpicture}

Scale font  The size of font in size pie can be scaled according to how big the part is automatically.

\begin{tikzpicture}
\pie[before number={$}, after number=,]{10/A, 20/B, 30/C, 40/D}
\end{tikzpicture}
### 1.6.2 Label text

The value of `text` can be `label` (default), `pin`, `inside` or `legend`.

\begin{tikzpicture}
\pie[text=pin]{10/A, 20/B, 30/C, 40/D}
\end{tikzpicture}

\begin{tikzpicture}
\pie[text=inside]{10/A, 20/B, 30/C, 40/D}
\end{tikzpicture}

\begin{tikzpicture}
\pie[text=legend]{10/First, 20/Second, 30/Third, 40/Fourth}
\end{tikzpicture}

### 1.7 More about style

#### 1.7.1 shadow

\begin{tikzpicture}
\pie[style=drop shadow]{10/A, 20/B, 30/C, 40/D}
\end{tikzpicture}
2 Variant Charts

2.1 Polar area diagram

The polar area diagram is similar to a usual pie chart, except sectors are equal angles and differ rather in how far each sector extends from the center of the circle.

\begin{tikzpicture}
\pie{10/A, 20/B, 30/C, 40/D}
\end{tikzpicture}

2.2 Square

\begin{tikzpicture}
\pie[square]{40/A, 30/B, 20/C, 10/D}
\end{tikzpicture}

Note: \texttt{explode} has no affects in square chart.

2.3 Clouds

\begin{tikzpicture}
\pie[cloud, text=inside, scale font]{10/A, 20/B, 30/C, 40/D}
\end{tikzpicture}

3 Examples

4 Acknowledgements

Many people contributed to \texttt{pgf-pie} by reporting problems, suggesting various improvements or submitting code. Here is a list of these people: Mohammed Alfaki, and Lukas Drude.