

Lecture 3: Pie Charts in L^AT_EX

What is a Pie Chart?

A pie chart displays the proportion (percentage or share) of each category in a total. Each value is represented as a slice of a circle.

Why Use Pie Charts?

- Shows contribution of each category to the whole
- Best for percentage-based datasets
- Very easy to understand visually

Things That Always Stay the Same

- Must use `\usepackage{pgf-pie}`
- `\pie{}` draws the pie
- Values are written as `percentage/text`

Things That Can Change

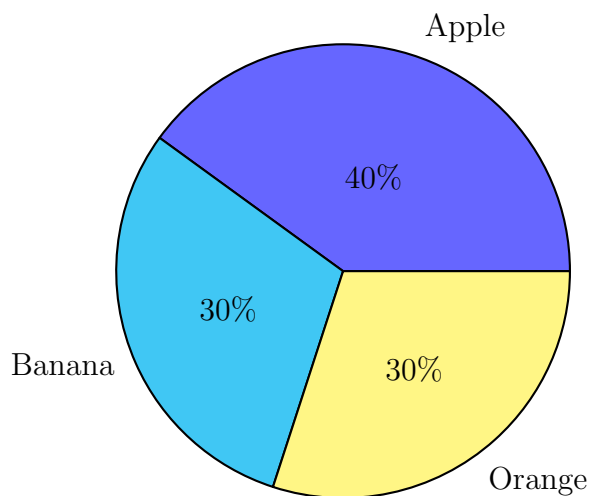
- Colors
- Slice labels
- Radius (size)
- Rotation (start angle)
- Text placement

Example 1: Basic Pie Chart (Favorite Fruits)

Code (Copy Paste):

```
\begin{tikzpicture}
\pie{40/Apple, 30/Banana, 30/Orange}
\end{tikzpicture}
```

Output Code:



Important Explanation:

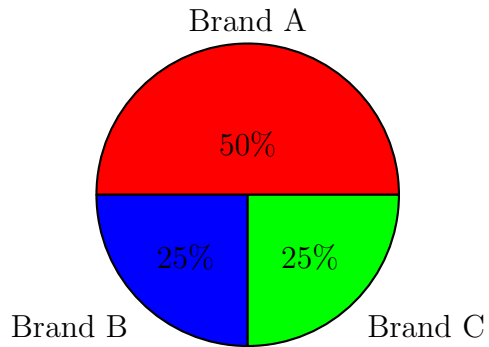
- 40/Apple → 40% slice labelled Apple

Example 2: Custom Colors & Size (Market Share)

Code (Copy Paste):

```
\begin{tikzpicture}
\pie[radius=2, color={red, blue, green}]
{50/Brand A, 25/Brand B, 25/Brand C}
\end{tikzpicture}
```

Output Code:



Important Explanation:

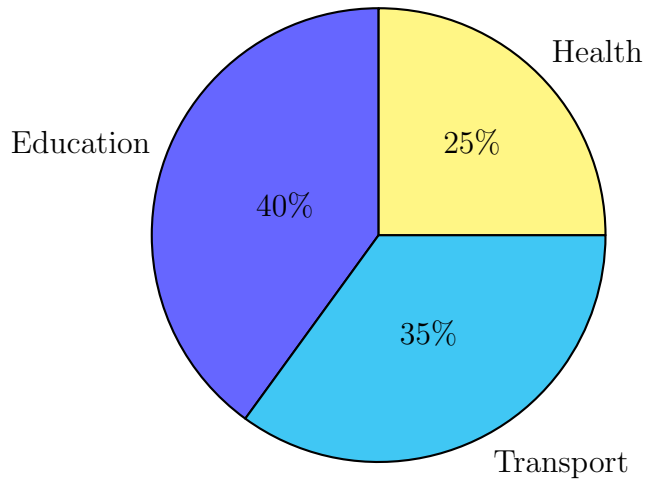
- radius=2 → chart becomes larger
- Custom colors set for slices

Example 3: Rotated Pie (Budget Distribution)

Code (Copy Paste):

```
\begin{tikzpicture}
\pie[rotate=90]
{40/Education, 35/Transport, 25/Health}
\end{tikzpicture}
```

Output Code:



Important Explanation:

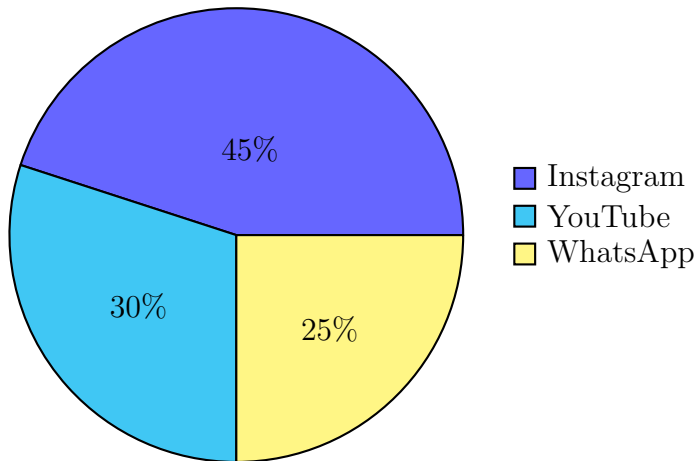
- `rotate=90` → moves start point for clarity

Example 4: Display Values (Social Media Usage)

Code (Copy Paste):

```
\begin{tikzpicture}
\pie[text=legend]
    {45/Instagram, 30/YouTube, 25/WhatsApp}
\end{tikzpicture}
```

Output Code:



Important Explanation:

- `text=legend` → shows labels outside clearly

Exercises

Create the following pie charts in **L^AT_EX**:

Exercise 1: Favorite Pets

Animal	Percent
Dog	50%
Cat	30%
Fish	20%

Expected Result: 50-30-20 slices.

Exercise 2: Daily Activities

Activity	Share
Sleep	35%
Study	40%
Leisure	25%

Expected Result: Bigger slice for Study.

Exercise 3: Company Production Share

Product	Share
A	45%
B	35%
C	20%

Expected Result:

A B C visibly.

Exercise 4: Online Usage

Platform	Share
Shopping	30%
Gaming	45%
News	25%

Expected Result:

Gaming largest slice at 45%.