

Tables and Figures Exercise

Guelma University LaTeX Course

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Objective

Learn to include tables and figures with captions and labels in LaTeX.

Tasks

1. **Create a Simple Table with Borders, Headers, and Cells**

Use the `tabular` environment to create a table with column headers and borders around each cell. Experiment with alignment options like left, center, and right.

2. **Insert a Sample Figure with a Caption and Label**

Add a sample image using the `includegraphics` command within the `figure` environment. Include a caption and label, then reference the figure in your text using `\ref{}`.

3. **Adjust Table Alignment and Add a Figure with Subfigures**

Experiment with different table alignments (e.g., left, centered, right-aligned). Add a figure containing subfigures using the `subfigure` environment, each with its own caption.

Example Code

Below is example LaTeX code for this exercise:

```
\documentclass{article}
\usepackage{graphicx}
\usepackage{caption}
\usepackage{subcaption}

\begin{document}

\section*{Example: Tables and Figures}
```

```

% Simple Table
\section*{Example of a Simple Table}
\begin{table}[h!]
  \centering
  \begin{tabular}{|c|c|c|}
    \hline
    \textbf{Column 1} & \textbf{Column 2} & \textbf{Column 3} \\
    \hline
    Cell 1 & Cell 2 & Cell 3 \\
    \hline
    Cell 4 & Cell 5 & Cell 6 \\
    \hline
  \end{tabular}
  \caption{Simple table with headers and cell borders}
  \label{tab:simple_table}
\end{table}

% Sample Figure
\section*{Example of a Figure with a Caption and Label}
\begin{figure}[h!]
  \centering
  \includegraphics[width=0.5\textwidth]{sample-image.jpg} % Replace with an actual image
  \caption{Sample figure with a caption}
  \label{fig:sample_figure}
\end{figure}

As shown in Figure \ref{fig:sample_figure}, this is a sample figure with a caption and label.

% Figure with Subfigures
\section*{Example of a Figure with Subfigures}
\begin{figure}[h!]
  \centering
  \begin{subfigure}{0.45\textwidth}
    \includegraphics[width=\linewidth]{subfig1.jpg}

% Replace with an actual image
    \caption{Subfigure 1}
    \label{fig:subfig1}
  \end{subfigure}
  \hfill
  \begin{subfigure}{0.45\textwidth}
    \includegraphics[width=\linewidth]{subfig2.jpg} % Replace with an actual image
    \caption{Subfigure 2}
    \label{fig:subfig2}
  \end{subfigure}
  \caption{Figure with two subfigures}
\end{figure}

```

```
        \label{fig:subfigures}  
\end{figure}  
  
\end{document}
```