Creating Advanced Tables in LaTeX

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1 Basic Table with Caption

Below is a simple table with a caption. The 'tabular' environment is used to create basic tables.

Table 1: Basic LaTeX Table with Column Titles

ID	Name	Grade
1	Alice	A
2	Bob	B
3	Carol	A+

2 Table with Column and Row Spanning

This table demonstrates column and row spanning using 'multicolumn' and 'multirow'.

Table 2: Table with Column and Row Spanning

Subject	Grades		
Student	Math	Science	English
Alice	A	A+	B
Bob	B	A (Combined Science & English)	
	A+	B+	A-

3 Auto-Fitting Columns using `tabularx` Package

Using the 'tabularx' package, you can create tables with columns that automatically adjust to fit the page width. The X column type in 'tabularx' allows for text wrapping.

Table 3: Auto-Fit Columns with Text Wrapping

ID	Description	Comments	Date
1	This entry contains a longer description that will auto-wrap.	Initial assessment complete.	2024-10-27
2	Brief description.	Reviewed and approved.	2024-10-28
3	Another entry with a longer description that spans multiple lines to demonstrate text wrapping.	Pending approval.	2024-10-29

4 Conclusion

This document demonstrates table creation in LaTeX with captions, column and row spanning, and auto-fitting columns. By using packages like 'multirow' and 'tabularx', tables can be formatted for complex layouts and adjustable widths.