\documentclass{beamer}

% Theme and color \usetheme{Madrid} \usecolortheme{seahorse}

% Language and encoding \usepackage[utf8]{inputenc} \usepackage[russian, english]{babel} \usepackage{booktabs} % For nicer tables

% Title info \title{Laboratory Work №5 — Tables} \subtitle{Practical Scientific Writing} \author{Nadia Ezzakate} \date{November 2025}

\begin{document}

% Title slide \begin{frame} \titlepage \end{frame}

% Purpose \begin{frame}{Purpose of the Work} Learn and practice creating tables in \LaTeX{}:
\begin{itemize} \item Use different column alignments (l, c, r)
\item Handle rows with too few or too many items
\item Apply the \texttt{\textbackslash multicolumn} command \end{itemize} \end{frame}

% Tasks \begin{frame}{Tasks} \begin{enumerate} \item Create a simple table with three columns \item Test l, c, r alignments \item Observe behavior with missing or extra items \item Apply \texttt{\textbackslash multicolumn} to merge columns \item Prepare report and presentation in Markdown and convert \end{enumerate} \end{frame}

% Tools \begin{frame}{Tools and Environment} \begin{itemize} \item Operating System: macOS
\item Editor: VS Code / Nano
\item Compiler: \texttt{pdflatex} (MacTeX 2025)
\item Version Control: Git + GitHub
\item Conversion Tool: Pandoc \end{itemize} \end{frame}

% Procedure - Simple Table \begin{frame}{Procedure: Simple Table} \begin{itemize} \item Created a three-column table: \texttt{{l l l}}
\item Result: all cells left-aligned \end{itemize} \end{frame}

% Procedure - Alignments \begin{frame}{Procedure: Testing Different Alignments} \begin{itemize} \item \texttt{{c c c}} → center-aligned
\item \texttt{{r r r}} → right-aligned
\item Each table compiled correctly and visually verified \end{itemize} \end{frame}

% Procedure - Missing / Extra Items \begin{frame}{Procedure: Missing and Extra Items} \begin{itemize}
\item Too few items: missing cells left blank
\item Too many items: LaTeX warning ``Extra alignment tab has been changed to \textbackslash cr''
\end{itemize} \end{frame}

% Procedure - Multicolumn \begin{frame}{Procedure: Using \textbackslash multicolumn} \begin{itemize}
\item Command used: \texttt{\textbackslash multicolumn{3}{c}{Animals and Food}}
\item Result: merged three columns into one centered heading \end{itemize} \end{frame}

% Results Table \begin{frame}{Results} \begin{table}[h] \centering \begin{tabular}{lll} \toprule Experiment & Description & Result \\ \midrule Alignment & Tested l, c, r columns & Works correctly \ Missing / Extra Items

& Checked behavior with uneven cells & As expected \ \texttt{\textbackslash multicolumn} & Spanned cells across columns & Works correctly \ \bottomrule \end{tabular} \end{table} \end{frame}

% Conclusion \begin{frame}{Conclusion} \begin{itemize} \item Successfully designed professional tables in \LaTeX
\item Learned alignment rules, spacing, and column merging
\item Foundation for clean, publication-ready scientific documents \end{itemize} \end{frame}

% References \begin{frame}{References} \begin{enumerate} \item \emph{Practical Scientific Writing – Section 5: Tables}
\item LaTeX Documentation: \url{https://www.latex-project.org/help/documentation/} \end{enumerate} \end{frame}

% Repository Info \begin{frame}{Repository Information} \begin{itemize} \item Full Repository: \url{https://github.com/nadiaelfe/lab05}
\item Release (to be added after upload): \emph{TBD} \end{itemize} \end{frame}

\end{document}