

```

\documentclass[12pt]{article}

\usepackage[margin=1in]{geometry}
\usepackage{hyperref}
\usepackage{enumitem}

\title{ChatBox AI \\\Large Design Specification}
\author{Robert Melena, Miguel Aguirre, Robert Guiterrez}
\date{\today}

\begin{document}
\maketitle
\thispagestyle{empty}
\newpage

\section{Purpose}
This Design Specification describes each page, component, and tool
used in ChatBox AI, and lists all packages, dependencies, and
libraries that would be required in a Dockerized deployment.

\section{Page-by-Page Breakdown}

\subsection{Landing / Login Page}
\begin{itemize}
  \item Components: Logo, brief description, login form, register
link.
  \item Actions: User can log in or navigate to registration.
\end{itemize}

\subsection{Registration Page}
\begin{itemize}
  \item Components: Inputs for name, email, password, confirm
password.
  \item Actions: Create account and redirect to the chat dashboard.
\end{itemize}

\subsection{Chat Dashboard}
\begin{itemize}
  \item Components: List of existing chat sessions, button to create
new session.
  \item Actions: Open existing sessions, delete sessions, or start a
new one.
\end{itemize}

\subsection{Chat Screen}
\begin{itemize}
  \item Components: Message list, text input, send button, session
title, export button.
  \item Actions: Send messages, receive AI responses, export
conversation.

```

\end{itemize}

\subsection{Settings Page}

\begin{itemize}

\item Components: Theme toggle, language options, data retention settings.

\end{itemize}

\subsection{Admin Dashboard}

\begin{itemize}

\item Components: Charts or tables summarizing total users, total sessions, total messages.

\end{itemize}

\section{Backend and API Design}

\subsection{Example Endpoints}

\begin{itemize}

\item \texttt{POST /api/auth/register}

\item \texttt{POST /api/auth/login}

\item \texttt{GET /api/sessions}

\item \texttt{POST /api/sessions}

\item \texttt{POST /api/sessions/{id}/messages}

\item \texttt{GET /api/admin/metrics}

\end{itemize}

\section{Dependencies and Libraries}

\subsection{Frontend (Example Stack)}

\begin{itemize}

\item React or Vue.js for the UI.

\item CSS framework such as Bootstrap or Material UI.

\item Axios or Fetch API for HTTP requests.

\end{itemize}

\subsection{Backend (Example Stack)}

\begin{itemize}

\item Node.js with Express.

\item Libraries for authentication, validation, and logging.

\end{itemize}

\subsection{Database}

\begin{itemize}

\item PostgreSQL as the primary relational database.

\end{itemize}

\subsection{Other Tools}

\begin{itemize}

\item Docker and docker-compose for containerization.

\item Jira for task management.

```
\item TestRail for test case management and reporting.  
\end{itemize}
```

```
\section{Docker Packaging Requirements}
```

The Docker image for the backend would include:

```
\begin{itemize}  
  \item Runtime Node.js.  
  \item Application code.  
  \item Configuration for connecting to the database.  
\end{itemize}
```

The frontend image would include:

```
\begin{itemize}  
  \item Compiled static assets served via NGINX.  
\end{itemize}
```

```
\end{document}
```