The \textbf{braket} package

Macros for Dirac bra–ket $\langle | \rangle$ notation and sets $\{ | \}$

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Commands defined are:

\begin{verbatim}
\bra{ } \ket{ } \braket{ } \set{ } \ (small \ versions)
\Bra{ } \Ket{ } \Braket{ } \Set{ } \ (expanding \ versions)
\end{verbatim}

The “small versions” use fixed-size brackets independent of their contents, whereas the “expanding versions” make the brackets and vertical lines expand to envelop their contents (internally using the \texttt{\left} and \texttt{\right} commands). You should use the vertical bar character “|” to input any extra vertical lines. In \texttt{\Braket} these vertical lines will expand to match the arguments, and in \texttt{\Set} the first vertical will expand. E.g.,

\begin{verbatim}
\Braket{ \phi | \frac{\partial^2}{\partial t^2} | \psi }
\Set{ x \in \mathbf{R}^2 | 0 < |x| < 5 }
\end{verbatim}

Likewise, you may make an expandable double-bar using either the “\|” command or its local alias “\|”.

NOT defined is “\ketbra” (for projection operators) because I prefer \texttt{\ket{ } \bra{ }}.

Because each definition is so small, it makes no sense to have a complicated generic version for many bracket styles. Instead, you can just copy the definitions and change \texttt{\langle} or \texttt{\rangle}, to what you like.