$$\begin{vmatrix}
i & j \\
| \uparrow \uparrow \downarrow \downarrow \uparrow \downarrow \uparrow \downarrow \uparrow \downarrow \rangle \\
i & j \\
| \uparrow \uparrow \downarrow \uparrow \downarrow \uparrow \downarrow \downarrow \uparrow \downarrow \rangle \\
0 & 1 & 0 & 1 & 1 & 0 & 0 & 1 & 1 \\
0 & 0 & 0 & 1 & 1 & 0 & 0 & 0 \\
\hline
0 & 1 & 0 & 0 & 1 & 1 & 0 & 0 & 0
\end{vmatrix}$$

$$\begin{vmatrix}
0 & 1 & 0 & 0 & 1 & 1 & 0 & 0 & 0 \\
\hline
0 & 1 & 0 & 0 & 1 & 1 & 1 & 0 & 0
\end{vmatrix}$$

$$\begin{vmatrix}
0 & 1 & 0 & 0 & 1 & 1 & 1 & 0 & 0 & 1 \\
\hline
0 & 1 & 0 & 0 & 1 & 1 & 1 & 0 & 0
\end{vmatrix}$$

$$\begin{vmatrix}
0 & 1 & 0 & 0 & 1 & 1 & 1 & 0 & 0 & 1 \\
\hline
0 & 1 & 0 & 0 & 1 & 1 & 1 & 0 & 0
\end{vmatrix}$$

$$\begin{vmatrix}
0 & 1 & 0 & 0 & 1 & 1 & 1 & 0 & 0 & 1 \\
\hline
0 & 1 & 0 & 0 & 1 & 0 & 1 & 1
\end{vmatrix}$$

$$\begin{vmatrix}
0 & 1 & 0 & 0 & 1 & 0 & 1 & 1 & 0 \\
\hline
0 & 1 & 0 & 0 & 1 & 0 & 1 & 1
\end{vmatrix}$$

$$\begin{vmatrix}
0 & 1 & 0 & 0 & 1 & 0 & 1 & 1 \\
\hline
0 & 1 & 0 & 0 & 1 & 0 & 1 & 1
\end{vmatrix}$$

$$\begin{vmatrix}
0 & 1 & 0 & 0 & 1 & 0 & 1 & 1 \\
\hline
0 & 1 & 0 & 0 & 1 & 0 & 1
\end{vmatrix}$$

$$\begin{vmatrix}
0 & 1 & 0 & 0 & 1 & 0 & 1 & 1 \\
\hline
0 & 1 & 0 & 0 & 1 & 0 & 1
\end{vmatrix}$$

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0 & 0 & 0 & 1 & 0 & 1 & 1 \\
\hline
0 & 1 & 0 & 0 & 1 & 0 & 1
\end{vmatrix}$$

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\hline
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\hline
0 & 1 & 0 & 0 & 1 & 1
\end{vmatrix}$$