List all Nucleophiles you can remember:

List all Electrophiles you can remember:

Show a few examples of a nucleophile reacting with an electrophile:

Provide a reasonable retrosynthetic analysis (retrosynthesis) of the following target molecules (retrosynthesis must involve a C-C bond disconnection for b and c):

\[
\begin{align*}
\text{O} & \quad \text{Ph} \\
\end{align*}
\]

\[
\begin{align*}
\text{OH} & \quad \text{Ph} \\
\end{align*}
\]