$$
\begin{array}{ccc}
H^1(\Omega) & \xrightarrow{\ \partial/\partial z\ } & L^2(\Omega) \\
\Big\downarrow{\Pi_0} & & \Big\downarrow{\Pi_1} \\
V_0 & \xrightarrow{\ \partial/\partial z\ } & V_1
\end{array}
$$