$$\begin{array}{ccc} \mathbf{C}_1 & \xrightarrow{\ f_1\ } & \mathbf{D}_1 \\ {\scriptstyle F}\downarrow {\scriptstyle \mathbf{Cat}} & \mathbf{Cat} & \mathbf{Cat}\uparrow {\scriptstyle G} \\ \mathbf{C}_2 & \xrightarrow[\ f_2\ ]{\mathbf{Cat}} & \mathbf{D}_2 \end{array}$$