

$$\begin{array}{ccccc}
 & & \pi_1(U_1) & \xrightarrow{j_1} & \\
 & \nearrow i_1 & \searrow & \searrow & \\
 \pi_1(U_1 \cap U_2) & & & \frac{\pi_1(U_1) * \pi_1(U_2)}{N} \dashrightarrow \cong & \pi_1(X) \\
 & \searrow i_2 & \nearrow & & \\
 & & \pi_1(U_2) & \xrightarrow{j_2} &
 \end{array}$$