# Presheaves over the category of elements of a presheaf

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## 1 The lemma

In the file `over_presheaf.lean` we prove a category-theoretic lemma that says if $P : \mathcal{C} \to \mathcal{U}$ is a presheaf on category $\mathcal{C}$ then the category of presheaves over the category of elements of $P$ is equivalent to the over category of $P$.

$$\mathrm{Psh}(\Sigma P) \cong \mathrm{Psh}(C)/P$$