

Lemma. There is a functor $\text{FixFunMinRes} : \mathbf{DP} \rightarrow \mathbf{Pos}_{\mathcal{U}}$ which maps:

1. An object (poset) in \mathbf{DP} to the same object (poset) in $\mathbf{Pos}_{\mathcal{U}}$.
2. A morphism $\mathbf{e} \in \text{Hom}_{\mathbf{DP}}(\mathbf{F}; \mathbf{R})$ to the morphism $H_{\mathbf{e}} \in \text{Hom}_{\mathbf{Pos}_{\mathcal{U}}}(\mathbf{F}; \mathbf{R})$,
where:

$$H_{\mathbf{e}}^{\star} : \mathbf{F} \rightarrow_{\mathbf{Pos}} \mathcal{U} \mathbf{R}$$

$$f \mapsto \{r \in \mathbf{R} \mid \mathbf{e}(f^*, r)\}.$$