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An axiomatic approach to Gabriel-Ulmer duality

The interplay between the Ind-completion and the presheaf construction $\mathrm{Ind}(C) \subset \mathrm{Set}^{C^{op}}$ sits at the core of the Gabriel-Ulmer duality. We axiomatize this phenomenon in the framework of a 2-category endowed with some additional structure. The environment that we provide allows us to introduce the notion of accessible and (locally) presentable object with respect to a Yoneda context $\mathbf{S} \Rightarrow \mathbf{P}$ in a 2-category $\mathcal{K}$, mimicking the relation that bonds the Ind-completion with the presheaf construction. Looking carefully at some properties of the Ind-completion we will introduce Gabriel-Ulmer structures, this set of additional axioms will lead to a convincing instantiation of the Gabriel-Ulmer duality.

References:

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