

find-hd-filter^{0,22}

$\forall T:\text{Type}, P:(T \rightarrow \mathbb{B}), as:T \text{ List}, d:\text{Top}.$

$(\exists a:T. (a \in as) \ \& \ P(a)) \Rightarrow (\text{first } a \in as \text{ s.t. } P(a) \text{ else } d) = \text{hd}(\text{filter}(\lambda a. P(a); as)) \in T$