

$\mathcal{M} \in \mathcal{C}\text{-Mod}$  IS REPRESENTED BY  $A \in \text{Alg}(\mathcal{C})$  IF  
 $\mathcal{M} \simeq \text{Mod-}A(\mathcal{C})$  AS LEFT  $\mathcal{C}$ -MODULE CATEGORIES.

$\text{Mod-}A(\mathcal{C}) \in \mathcal{C}\text{-Mod}$  VIA  
 $X \triangleright (M, \triangleleft) := (X \otimes M, \triangleleft = \text{id}_X \otimes \triangleleft)$

INTERNAL TO  $\mathcal{C}$

FOR  $A := (A, m, u) \in \text{Alg}(\mathcal{C})$

$\text{Mod-}A(\mathcal{C})$

RIGHT  $A$ -MODULES  
 $M := (M, \triangleleft)$  IN  $\mathcal{C}$

EXTERNAL TO  $\mathcal{C}$

$\mathcal{M} := (\mathcal{M}, \triangleright, m, p)$

$\in \mathcal{C}\text{-Mod}$

LEFT  $\mathcal{C}$ -MODULE  
 CATEGORY

WE WILL DISCUSS  
 WHEN THIS OCCURS