Definition (Enriched category). We say that a category **C** is enriched in **D** if:

1. For all objects X, Y of **C**, the set $\text{Hom}_{\mathbf{C}}(X; Y)$ can be considered an object of **D**;

2. **D** is a monoidal category (**??**), with monoidal product $\otimes_{\mathbf{D}}$;

3. For all objects X, Y, Z of **C**, there exists a certain morphism $m_{X,Y,Z}$ in **D**, which goes from the object $\text{Hom}_{\mathbf{C}}(X; Y) \otimes_{\mathbf{D}} \text{Hom}_{\mathbf{C}}(Y; Z)$ to the object $\text{Hom}_{\mathbf{C}}(X; Z)$:

$$m_{X,Y,Z} : \text{Hom}_{\mathbf{C}}(X; Y) \otimes_{\mathbf{D}} \text{Hom}_{\mathbf{C}}(Y; Z) \to \text{Hom}_{\mathbf{C}}(X; Z).$$