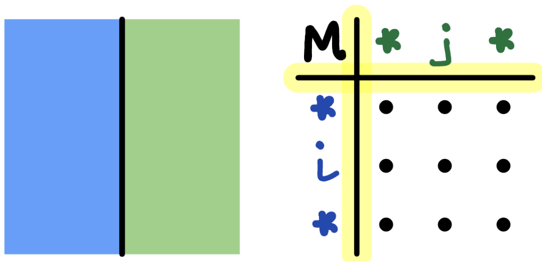
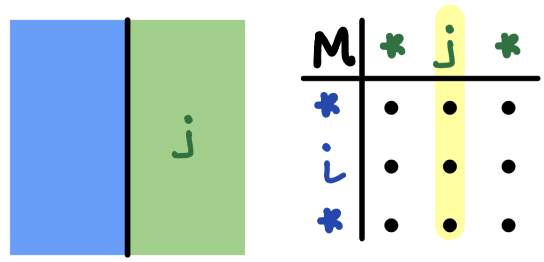
As we have explored, a fibrant double category can be understood as a **logic**: a category of types and terms $\mathbb{C}_0$, indexing a matrix category of judgements and inferences $\mathbb{C}$.

By defining *a logic*, we now journey into **metaLogic**. We can explore this multiverse using **color syntax**: a visual language which combines string diagrams and formal syntax.

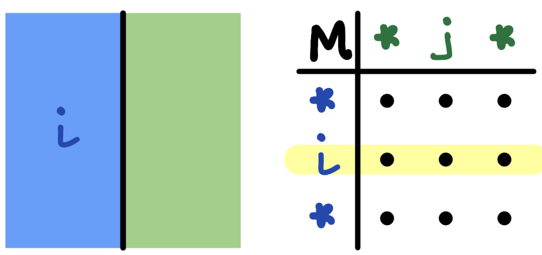
The basic principle of color syntax is *substitution*. Recall that a string represents a matrix $M : I \times J \to \mathbb{V}$ of judgements in some "base logic" $\mathbb{V}$ (ref). To write indices in the regions of the diagram is to substitute into $M(-,-)$: we can determine a row, a column, and an entry.



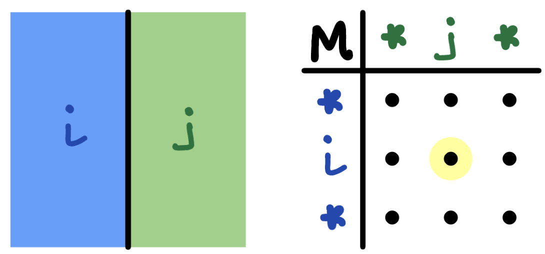
$M : I \times J \to \mathbb{V}$



$M(-,j) : I \to \mathbb{V}$

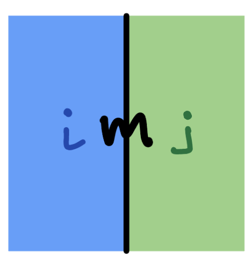


$M(i,-) : J \to \mathbb{V}$



$M(i,j) : \mathbb{V}$

Moreover, we can determine an individual *element* $m : M(i,j)$, by writing on the string. We can think of this as "data on the wire".



$m : M(i,j)$

Hence color syntax connects levels of generality, from a whole structure to an individual element thereof. This can be greatly simplifying. Most of the underlying data of category theory is stored as matrices: a category is a matrix of sets, a functor is a matrix of functions, etc. This visual method enables us to reason about high-dimensional matrices, simply by writing in a diagram to specify a part of a matrix.