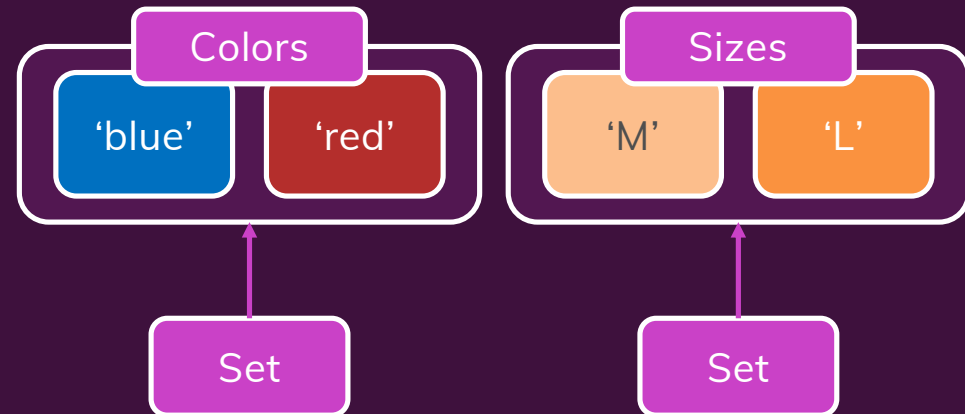


What are Set (Array) Algorithms About?

A Set is a **collection of values** (objects, numbers) which forms an **entity itself**

Example: Shirt manufacturing



Cartesian Product

Example: Shirt manufacturing

Colors

'blue'

'red'

Sizes

'M'

'L'

New Set: All variants that should be manufactured

'blue'

'M'

'blue'

'L'

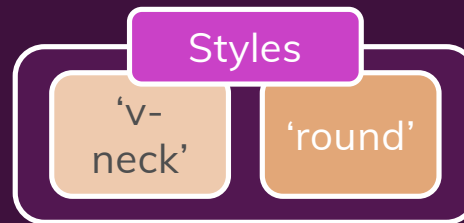
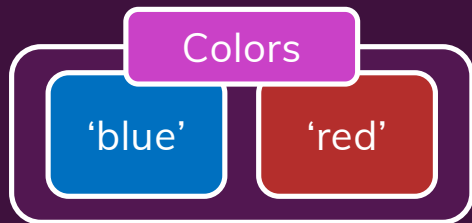
'red'

'M'

'red'

'L'

Cartesian Product – More Than 2 Sets



Permutations (With & Without Repetition)

An ordered combination of values.

Without Repetition

Example: Todo list items

['Walk dog', 'Clean toilet', 'Order food']

['Walk dog', 'Clean toilet', 'Order food']
['Clean toilet', 'Walk dog', 'Order food']
['Walk dog', 'Order food', 'Clean toilet']
...

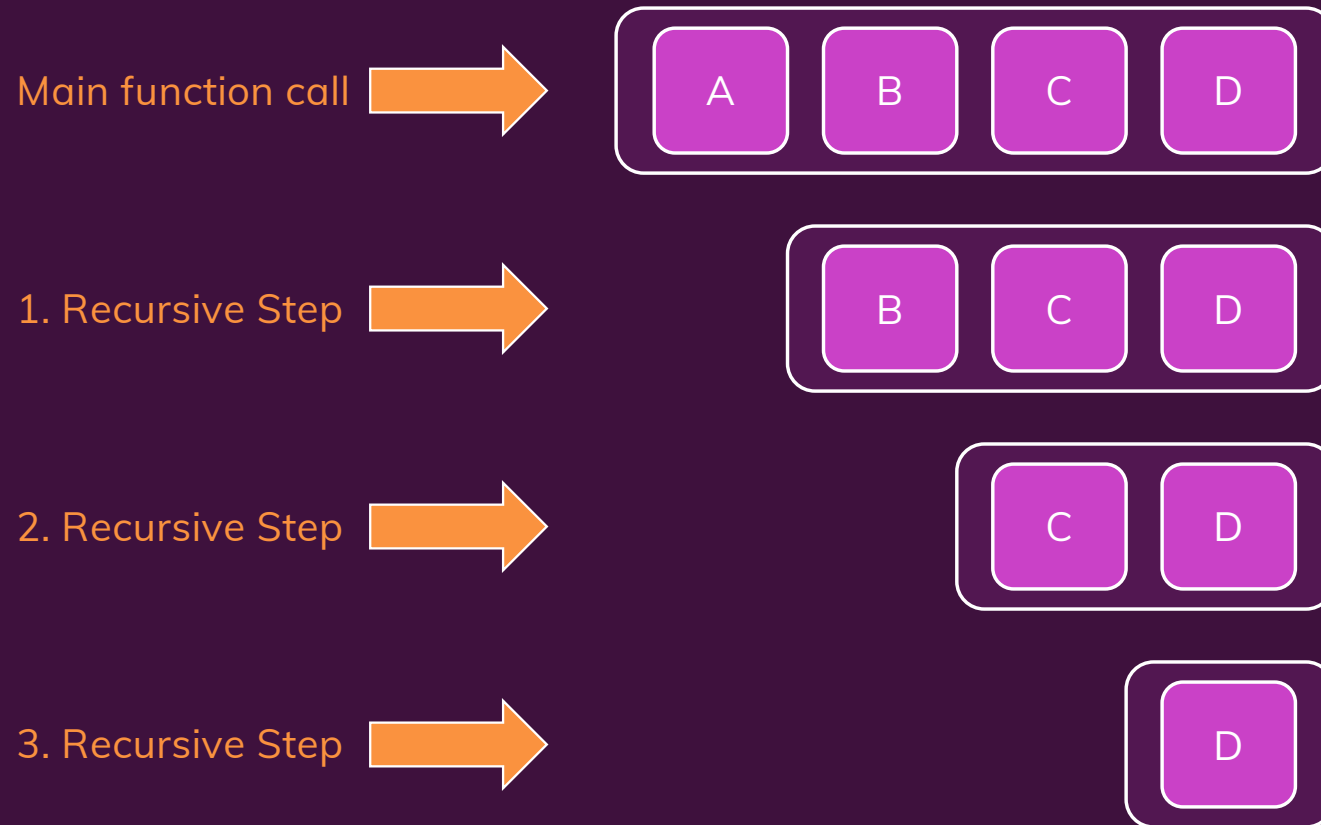
With Repetition

Example: Safe combination you want to set

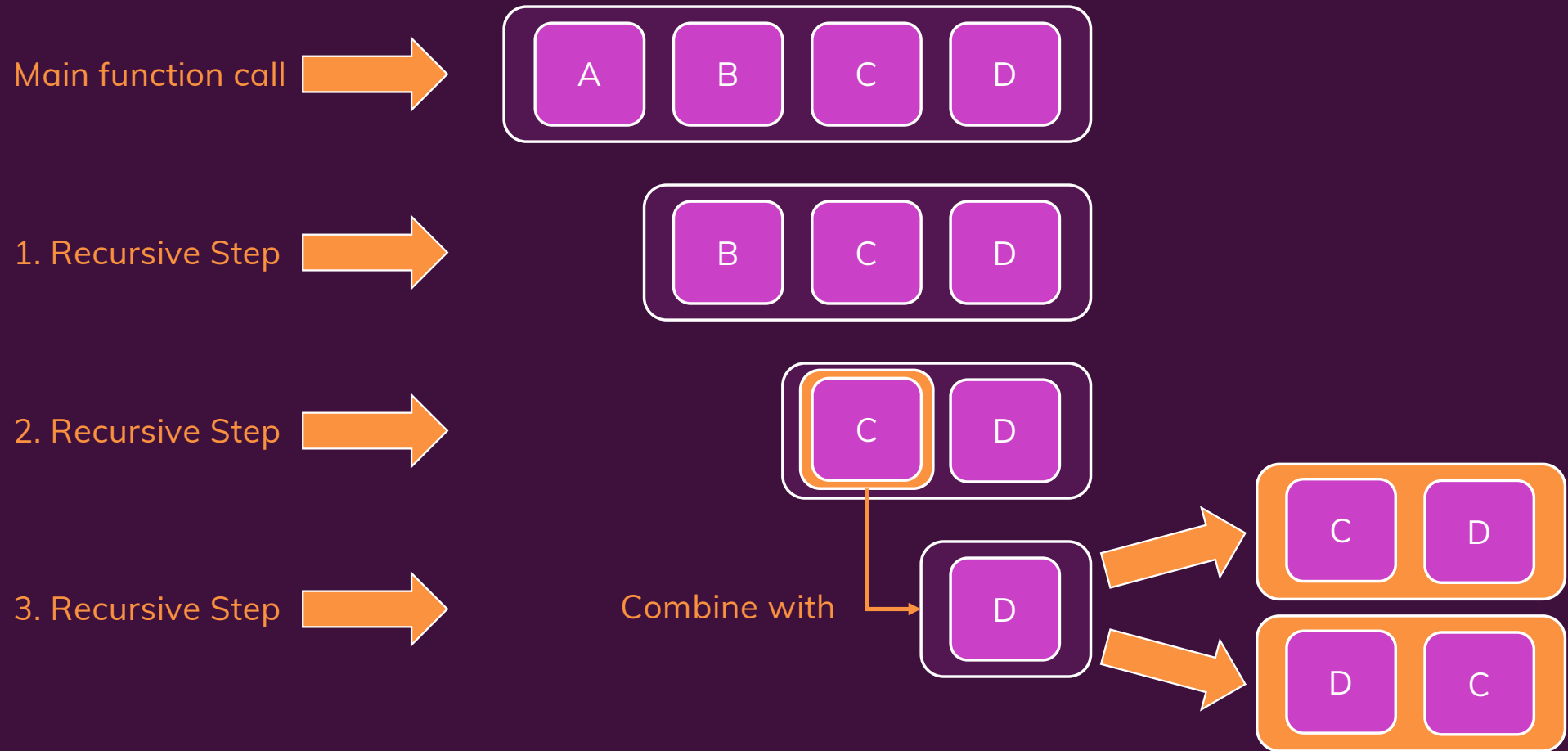
[1, 5, 9]

[1, 1, 9]
[1, 1, 1]
[9, 5, 9]
...

Recursive Permutations



Recursive Permutations



Recursive Permutations

