

Map

This bad boi:

```
> map :: (a -> b) -> [a] -> [b]
> map f []      = []
> map f (x:xs)  = f x : (map f xs)
```

Do you have a cool function that works on single items and that you wanna apply to a whole list? Well MAP is your answer!!!!!!! Map is a function that takes a function that works on a single **a** (e.g. a conversion), and a list, then applies the function to every item on that list, putting the results into a new list.

For example, say you had [1,2,3] but you REALLY wanted ['a','b','c'] and you had a function that could turn a single **Int** to a **Char** (**toAlpha**), you could **map** that single function onto [1,2,3].

```
map toAlpha [1,2,3] = ['a','b','c']
```

map goes through the list recursively applying the function **f** to each item until it hits the base case of the empty list.