universität innsbruck

Functional Programming

WS 2023/2024

LVA 703025

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Live Exercises 7
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Exercise 1 Map and Filter

In this exercise, you will redefine the following recursive functions using map and filter.

```
squareList [] = []
squareList (x : xs) = x ^ 2 : squareList xs
evenList [] = []
evenList (x : xs)
  | even x = x : evenList xs
  | otherwise = evenList xs
squareEven [] = []
squareEven (x : xs)
  | even x = (x ^ 2) : squareEven xs
  | otherwise = squareEven xs
```

- 1. Rewrite squareList in one line using map
- 2. Rewrite evenList in one line using filter
- 3. Rewrite squareEven in one line using a combination of map and filter