

Chapter 7, "More functional patterns"

Syntactic considerations

- *lambda syntax:*

$\lambda x \rightarrow x + 1$

is equivalent to

$f\ x = x + 1$

- *point-free style:*

$f\ x = x + 1$

is equivalent to

$f = (+1)$

Function definition patterns

- pattern matching
- case expressions
- guards

Pattern matching

```
foo :: Bool -> Int
```

```
foo True = 1
```

```
foo False = 0
```

Case expression

```
foo :: Bool -> Int
foo b = case b of
  True  -> 1
  False -> 0
```

Guards (v1)

```
foo :: Bool -> Int
```

```
foo b
```

```
  | b == True  = 1
```

```
  | b == False = 0
```

Guards (v2)

```
foo :: Bool -> Int
foo b
  | b          = 1
  | otherwise = 0
```

(BTW: otherwise isn't a keyword, it's just a synonym for True)

For next week: "Chapter 8: Recursion"

- See exercise template here: <https://gist.github.com/twopoint718/875626818ea55cfa5ced3e81e1e12180>