Chapter 7 High Order Functions
Chapter 7 High Order Functions A function is high order if it takes a function as an A function is high order if it takes a result.
acoment or returns "
$(\alpha \rightarrow \alpha) \rightarrow \alpha \rightarrow \alpha$
twice $f \times = f(f \times)$ to the coded using
-> Common fragramming patterns can be coded using. high order function high order function
high order function
high order function > Domain specific languages (DSL) can be defined as collections of high order functions collections of high order functions can
> Domain spectric regular functions
collections of high order functions can.
collections of high order functions con
be helpful for programs > Folder function, number of functions on lists can be applied using the pattern of primitive recursion
> Folder function, number of tunctions
Using the pattern of primiting
$E_{x}: f_{x} = Y$
$f(x: xs) = x \oplus f \times s$ $f(x: xs) = x \oplus f \times s$
$f(x: xs) = x \oplus f$ Generic infix operator $V=0$ Sum $[X] = 0$ $A = f$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$
, sem x
Sum (x: xs) = x + sum (fold right) takes Thigh order library function folds (fold right) takes
- High order library tunction town
Nach D. is arguments. Base case
-> High order library function told (1810) V and P as arguments Base case Ex: Sum = folds (+) 0
Ex: Sum = folds (+). O Product = folds (*) 1 Recursion
Product = 30101 La Recursion
-Think of folder non-reconsively
Think of tolds non-recording
\cdots
= folds (+) 0 [1,2,3]
= foldr (+) O [1,2,3] $= foldr (+) O (1:(2:(3:[3])) Replace (:) with operator and (I) with base case$

7 1 (2+ 1/1)

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