

```
fun append (xs,ys) =  
  if xs=[]  
  then ys  
  else (hd xs)::append(tl xs,ys)  
  
fun map (f,xs) =  
  case xs of  
    [] => []  
  | x::xs' => (f x)::(map(f,xs'))  
  
val a = map (increment, [4,8,12,16])  
val b = map (hd, [[8,6],[7,5],[3,0,9]])
```

Programming Languages

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Why Part A, Part B, Part C

One Course in 3 Parts

- 100-200 hours of amazing stuff
- “My novel” that I can’t bear to think of broken up
 - Cross-cutting themes
 - Neat things that tie together later
 - Key contrasts that come only at the end
 - A lot of thought in what to include and what not to
- I *really* want you to do all 3 parts
 - (Certificates priced accordingly)
 - When I say “the course”, I usually mean everything
- So why break it up...

Reasons for parts

- Overall, much more material and more challenging than “most MOOCs”
- Give you tough-but-intermediate goals that deserve recognition
- Give you a chance to “rest” before proceeding
 - Closer approximation to “different paces”

How it breaks down

- Unfortunately “by language” when that’s not the point
- Part A is roughly as much as Part B and Part C combined
 - No natural place to sub-divide Part A in my opinion
- Part A: 3 homeworks, 1 exam
- Part B: 2 homeworks (1 more challenging)
- Part C: 2 homeworks (1 more challenging), 1 exam