

```
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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Welcome to Part C!

Re-Welcome!

Parts A & B covered a lot – now let's build on it!

Challenging opportunity to learn *the fundamental concepts* of programming languages

With hard work, patience, and an open mind, this course makes you a much better programmer

- *Poor* course summary: “Uses ML, Racket, and **Ruby**”

Now:

- A dynamically typed object-oriented language
- The essence of “OOP”: inheritance and overriding
- *Contrasting* functional programming and OOP
- More advanced OOP features and idioms
- Subtyping and *contrast* with ML polymorphism (generics)

(Lack of) introductory material

Similar format to prior parts

So “dive right in”

(As needed, consult course information and prior materials)