

List Abstractions

- Use map to design the function convert-euro, which converts a list of US\$ amounts into a list of € amounts based on an exchange rate of €1.22 per US\$. Also use map to design convertFC, which converts a list of Fahrenheit measurements to a list of Celsius measurements. Finally, design translate, a function that translates a list of Posns into a list of list of pairs of numbers.
- An inventory record specifies the name of an item, a description, the acquisition price, and the recommended sales price. Design eliminate-expensive. The function consumes a number, ua, and a list of inventory records, and it produces a list of all those structures whose sales price is below ua.
- Design a function that creates the list of the first n even numbers;
- The append function in ISL concatenates the items of two lists or, equivalently, replaces '() at the end of the first list with the second list. Use foldr to design append-from-fold. What happens if you replace foldr with foldl?
- The fold functions are so powerful that you can define almost any list-processing functions with them. Use foldr to define filter.

Space Invaders revisited

- Be sure to fix any and all problems that your graders have (or would have) discovered.
- Next, you are to use local and "list abstractions" (abstractions such as map, foldr, filter, etc.) wherever your functions may benefit from them, especially for the lists of objects in your project. You should notice that the length of your program decreases considerably.