

```
merge :: Ord a => [a] -> [a] -> [a]
merge [] [] = []
merge xs [] = xs
merge [] ys = ys
merge (x:xs) (y:ys)
  | x < y = x:merge xs (y:ys)
  | otherwise = y:merge (x:xs) ys
```

```
[*Main> merge [3,4,5] [1,7,10]
[1,3,4,5,7,10]
[*Main> merge [1,2,3] [4,5,6]
[1,2,3,4,5,6]
[*Main> merge [2,4,6] [1,3,5]
[1,2,3,4,5,6]
[*Main> merge [7,8,9] [1,2,3]
[1,2,3,7,8,9]
*Main> █
```