

Learn Physics with Functional Programming

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Chapter 5: Exercises

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October 23, 2024

5.4 We have the function

```
range :: Int -> [Int]
range x = if x >= 0
          then [0..x]
          else [x..0]
```

which returns a list containing all the integers between the argument (inclusive) and 0 in increasing order, i.e, $\text{range}(2) = 0, 1, 2$, $\text{range}(-4) = -4, -3, \dots, 0$, and $\text{range}(0) = 0$.

We demonstrate as follows:

```
ghci> range (-4)
[-4,-3,-2,-1,0]
ghci> range 2
[0,1,2]
ghci> range (-4)
[-4,-3,-2,-1,0]
ghci> range 0
[0]
```