

- Please write all your Haskell functions from this exercise sheet into a single .hs-file and upload it in OLAT.
- You can use a template .hs-file that is provided on the proseminar page.
- The file should compile with ghci.
- Once the file has been uploaded, it cannot be changed or resubmitted!

Exercise 7.1 *Live exercise*

1. Write an `Ord` instance for the datatype `A` below that implements the same order as the derived lexicographic order with `deriving Ord`.

```
data A = B (Double, Integer, Integer) | C String (Double, Double)
  deriving (Show, Eq)
```

Try the following:

```
B (5.898, 1, 2) <= B (5.42, 0, 1)
C "AA" (0, 0) <= B (52.42, 890, 34)
compare (C "A" (5.1, 2)) (C "B" (8.1, 2))
compare (B (3,1,1)) (B ((sqrt 3)^2,1,1))
```

How can you compare the results of your instantiation, to the answers the derived lexicographic order would give?