

```

-- Model solution for Lab04
--
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module Lab04
where

-- Enumerate a list of numbers in a given range with given step
--
-- Example: enumFromToBy 5 50 7 = [5, 12, 19, 26, 33, 40, 47]
--
enumFromToBy          :: Int -> Int -> Int -> [Int]
enumFromToBy m n k | m > n      = []
                   | otherwise  = m : enumFromToBy (m + k) n k

-- Remove all empty strings from a list of strings
--
-- Example: removeEmpty ["", "Hello", "", "", "World!"] = ["Hello", "World!"]
--
removeEmpty           :: [String] -> [String]
removeEmpty []        = []
removeEmpty ([] :strs) = removeEmpty strs
removeEmpty (str:strs) = str : removeEmpty strs

-- Fibonacci Numbers
--
-- Examples: fibonacci 4 = 2
--           fibonacci 20 = 4181
--
fibonacci    :: Int -> Int
fibonacci 1  = 0
fibonacci 2  = 1
fibonacci n  = fibonacci (n - 2) + fibonacci (n - 1)

-- Count the number of 'True' values in a given list
--
-- Example: countTrue [False, True, True, False, True] = 3
--
countTrue    :: [Bool] -> Int
countTrue [] = 0
countTrue (b:bs) | b      = 1 + countTrue bs
                 | otherwise = countTrue bs

-- Make numerals positive (optional)
--
-- Examples: makePositive [-1, 0, 5, -10, -20] = [1, 0, 5, 10, 20]
--
makePositive :: [Int] -> [Int]
makePositive [] = []
makePositive (x:xs) | x < 0 = -x : makePositive xs
                   | otherwise = x : makePositive xs

```