ITCS 4102 YIN HANG, KWOK October 22, 2016

1.

letter :: Int -> Char

letter n | n >= 90 = 'A'

| n >= 80 = 'B'

| n >= 70 = 'C'

| n >= 60 = 'D'

| otherwise = 'F'

grade :: [Int] -> [Char]

grade xs = map letter xs

2.

sort :: Ord a => [a] -> [a]

sort [] = []

sort (p:xs) = (sort lesser) ++ [p] ++ (sort greater)

where

lesser = filter (< p) xs

greater = filter (>= p) xs

freq x xs = length [ True | y <- xs, x ==y]

histogram [] = []

histogram (x:xs) = (x, freq x (x: sort xs)) :

histogram (filter (/=x) (x:sort xs))

3.

allOcrDelete :: Eq a => a -> [a] -> [a]

allOcrDelete \_ [] = []

allOcrDelete del (x:xs)

| del == x = allOcrDelete del xs

| otherwise = x:allOcrDelete del xs

4.

coPrime :: Int -> Int -> Bool

coPrime x y = gcd x y == 1

INPUT and OUTPUT

