**# hw.3 find prime numbers in seq(2, 100, by = 1)**

x <- c()

prime <- function(x) {

流行病學與生物統計計算

Homework 3

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y <- sort(x, decreasing = FALSE)

ref <- seq(2, max(y), by = 1)

i <- 1

k <- 1

done <- FALSE

non\_prime <- c()

sample <- 1

while (!done) {

while (y[i] > ref[k]) {

if ((y[i] %% ref[k]) == 0) {

non\_prime[sample] <- y[i]

sample <- sample + 1

break

} else {

k <- k + 1

}

}

if (i == length(y)) {

done <- TRUE

}

i <- i + 1

k <- 1

}

return(setdiff(y, non\_prime))

}

prime(seq(2, 100, by = 1))

**# Ans : 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97**