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

```r
# hw.3 find prime number in seq(2, 100, by = 1)
x <- c()
prime <- function(x) {
        y <- sort(x, decreasing = FALSE)
        ref <- seq(2, max(y), by = 1)
        i <- length(y)
        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 == 1) {
                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
```

流行病學與生物統計計算
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