

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

```
x <- c()
prime <- function(x) {
  y <- sort(x, decreasing = FALSE)
  i <- length(y)
  k <- 1
  done <- FALSE
  non_prime <- c()
  sample <- 1
  while (!done) {
    while (i > k) {
      if ((y[i] %% y[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), decreasing = FALSE)
}
```

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

