**Assignment 15.3**

1. Write a R program using control operators to test whether following values are prime numbers or not by providing a PRIME or NOT PRIME message as output : a. 103 b. 82 c. 179

num = as.integer(readline(prompt="Enter a number: "))

103

flag = 0

if(num > 1) {

flag = 1

for(i in 2:(num-1)) {

if ((num %% i) == 0) {

flag = 0

break

}

}

}

if(num == 2) flag = 1

if(flag == 1) {

print(paste(num,"is a prime number"))

} else {

print(paste(num,"is not a prime number"))

}

##

is.prime <- function(num) {

if (num == 2) {

TRUE

} else if (any(num %% 2:(num-1) == 0)) {

FALSE

} else {

TRUE

}

is.prime <- function(103) {

if (103 == 2) {

print(paste(103,"is a prime number"))

} else if (any(103 %% 2:(103-1) == 0)) {

print(paste(103,"is not a prime number"))

} else {

print(paste(103,"is a prime number"))

}

2. Write a R program using control operators to identify letter u and a both occur in the fol-lowing words:

a. above b. unit c. under

abc <- c("above","unit","under")

which(abc == grep("a",abc,value = TRUE) & abc == grep("u",abc,value = TRUE))