corr <- function(directory, threshold = 0) {

filelist <- list.files(directory)

shortlist <- c()

counter <- 0

results <- c()

corvalues <- c()

for (a in filelist) {

counter <- 0

filelocation <- paste(directory,"/",a,sep="")

df <- read.csv(filelocation)

leng <- nrow(df)

result <- nrow(na.omit(df)) - 1

for (i in 1:leng) {

if (is.na(df[i,'sulfate']) | is.na(df[i,'nitrate']))

counter <- counter + 1

}

result <- (leng - counter)

if (result >= threshold) {

results <- append(results, result)

shortlist <- append(shortlist, a)

temp <- na.omit(df)

corvalues <- append(corvalues,cor(temp$sulfate, temp$nitrate))

}

}

output <- data.frame(id = shortlist, nobs = results)

if (length(corvalues) == 0) {

corvalues <- numeric(length = 0)

}

return(output)

return(corvalues)

}