

```
1 read_state <- function(abbr, year) {
2   state_data <- read.csv(paste("data/states/", abbr, ".TXT", sep=""),
3     header = FALSE,
4     colClasses = c("character", "character", "numeric", "character", "numeric")
5   )
6   colnames(state_data) <- c("ABBR", "GENDER", "YEAR", "NAME", "VALUE")
7
8   state_data <- subset(state_data, state_data$YEAR == year)
9
10  # calculate ranks
11  rank_names <- function(gender) {
12    group <- subset(state_data, state_data$GENDER == gender)
13    # they should be presorted, but can't be too careful
14    group <- group[order(-group$VALUE, group$NAME),]
15    group$RANK <- 1
16    for (i in 2:NROW(group)) {
17      if (group[i,]$VALUE < group[i-1,]$VALUE) {
18        group[i,]$RANK <- i
19      } else {
20        group[i,]$RANK <- group[i-1,]$RANK
21      }
22    }
23    return(group)
24  }
25
26  return(rbind(rank_names("F"), rank_names("M")))
27 }
28
29 read_national <- function(year) {
30   national_data <- read.csv(paste("data/national/yob", year, ".txt", sep=""),
31     header = FALSE,
32     colClasses = c("character", "character", "numeric")
33   )
34   colnames(national_data) <- c("NAME", "GENDER", "VALUE")
35
36  # calculate ranks
37  rank_names <- function(gender) {
38    group <- subset(national_data, national_data$GENDER == gender)
39    # they should be presorted, but can't be too careful
40    group <- group[order(-group$VALUE, group$NAME),]
41    group$RANK <- 1
42    for (i in 2:NROW(group)) {
43      if (group[i,]$VALUE < group[i-1,]$VALUE) {
44        group[i,]$RANK <- i
45      } else {
46        group[i,]$RANK <- group[i-1,]$RANK
47      }
48    }
49    return(group)
50  }
51
52  return(rbind(rank_names("F"), rank_names("M")))
53 }
```