Exercise Sheet 1 — Data manipulation in R

Problem 1. Consider the data sets `US_Foreign_Aid_00s.csv`, `US_Foreign_Aid_10s.csv` and `US_Foreign_Aid_90s.csv` in the zip file `US_Foreign_Aid.zip` on Moodle. These contain information on the US foreign aid by country for different programs for the years 1990 to 2010. These data are made available as part of the USAID Open Government initiative (`https://explorer.usaid.gov/`).

(a) Merge the 3 data sets by country and program

(b) Reshape the data in the long format such that the resulting data set looks like the following

```
head(df_aid_long)

##   Country.Name                                         Program.Name Year FY
## 1  Afghanistan                            Child Survival and Health 1990 NA
## 2  Afghanistan           Department of Defense Security Assistance 1990 NA
## 3  Afghanistan                                 Development Assistance 1990 NA
## 4  Afghanistan Economic Support Fund/Security Support Assistance 1990 NA
## 5  Afghanistan                                     Food For Education 1990 NA
## 6  Afghanistan                        Global Health and Child Survival 1990 NA
```

(c) Compute the total foreign aid over the years, as well as for each year, given to Afghanistan, Iraq and Yemen. Use either the reshaped data or the one from question a)

(d) Do as in c) but only for the aid programs concerned with security/military. Use `grep`.