

```
#!/usr/bin/env Rscript
#Chapter 8.8 Final Practial
```

```
prepare_workspace = function(){
  rm(list = ls())
  graphics.off()
  library(dplyr)
}
```

```
# get the data and make two vectors coz easier for loops
```

```
load("../Data/KeyWestAnnualMeanTemperature.RData")
Years = ats[[1]]
Temps = ats[[2]]
MyData = as.data.frame(cbind(Years, Temps))
```

```
# plot simple time series
```

```
autocorr = acf(Temps, 1)[[1]][2]
```

```
print("autocorrelation coefficient for lag of 1 is ")
print(autocorr)
```

```
# repeating with the 1000 samples in a for loop
acfs = vector("numeric", 1000)
for (i in 1:1000){
  acfs[i] = acf(sample(Temps, 100))[[1]][2]
}
```

```
# repeating using piping - but since acf gives a list, the answer is messy,
hence unlist and select out alternate values
acfs2 = vector("numeric", 1000)
for (i in 1:1000){
  acfs2[i] <- Temps %>% sample(., 100) %>% acf(., 1)
}
acfs2 = unlist(acfs2[c(FALSE, TRUE)])
```