Fs

If you don't have them already, you need to install quantmod and fBasics packages.

```
install.packages('quantmod')
install.packages('fBasics')
```

You can type all of the next steps in a single R-studio file.

Now, tell R that we want to use the quantmod packages

```
require(quantmod)
```

Find the stock tickers you want to study, and type them within the enclosed quotation marks shown on the following code. Let's assume we want to calculate beta for Aaple ('AAPL').

```
mytick <- c('AAPL')
```

Then, specify the time period for which you want to study. In general, analysts use monthly data for five years. At the time of writing (09/06/2015), the appropriate date to put would be 09/06/2010. Note that the date format should be "yyyy-mm-dd".

```
temp <- getSymbols(mytick, src="yahoo", from="2010-09-06")  # Use Yahoo Finan
ce to collect data
```

Then, type the following codes.

```
data <- Ad(to.monthly(get(mytick[1])))
for(i in 2:length(mytick))  {
  temp <- Ad(to.monthly(get(mytick[i]))) # We are only interested in monthly
adjusted closing prices.
  data <- cbind(data, temp) # Merge the columns
  }
colnames(data) <- mytick
sp500 <- getSymbols("^GSPC", src="yahoo", from="1989-12-01") # Now let's get
the data for S&P500
sp500 <- Ad(to.monthly(GSPC)) # We are only interested in monthly adjusted cl
osing prices.
names(sp500) <- "SP500"
data <- cbind(data,sp500) # Merge the columns
```

```
ret <- 100*diff(log(data)) # "ret" table returns the monthly returns of the s
tock prices

require(fBasics)

fit <- lm(ret[,1] ~ ret$SP500)
coef(fit)
```

After you run the code, you will see:

```
##                   AAPL
## (Intercept) A
## ret$SP500   B
```

The highlighted "B" is the beta for the stock.