df <-read.csv(file = "C:/Users/JY Toh/Downloads/GE.csv")

#Assignment 2

GEClose <- df$GEClose # extract column

XOMClose <- df$XOMClose # extract column

SBUXClose <- df$SBUXClose # extract column

MCDClose <- df$MCDClose # extract column

AAPLClose <- df$AAPLClose # extract column

#daily return

# t+1...tn /t...tn

GEret <- log(GEClose [-1] /GEClose[-length(GEClose)])

XOMret <- log(XOMClose [-1] /XOMClose[-length(XOMClose)])

SBUXret <- log(SBUXClose [-1] /SBUXClose[-length(SBUXClose)])

MCDret <- log(MCDClose [-1] /MCDClose[-length(MCDClose)])

AAPLret <- log(AAPLClose [-1] /AAPLClose[-length(AAPLClose)])

M <- cbind(GEret, XOMret, SBUXret, MCDret, AAPLret)

cov(M)

#Assignment 3

#30day return

GEret30 <- log(GEClose [-1:-29] /GEClose[-length(GEClose)+28:-length(GEClose)])

XOMret30 <- log(XOMClose [-1:-29] /XOMClose[-length(XOMClose)+28:-length(XOMClose)])

GEvol <- sd(GEret30)\*sqrt(30)

XOMvol <- sd(XOMret30)\*sqrt(30)

GEhedgeratio <- GEvol \* GEClose

XOMhedgeratio <- XOMvol \* XOMClose