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Assignment 3

Code:

# Creating matrix A

a1 = c(1,4,7)

a2 = c(2,5,8)

a3 = c(3,6,9)

A = array(data = c(a1,a2,a3),dim = c(3,3))

A

# Creating matrix B

b1 = c(1,2,7)

b2 = c(2,1,8)

b3 = c(3,7,9)

B = array(data = c(b1,b2,b3), dim = c(3,3))

B

# Elemental multiplication

product = A\*B

product

# Matrix multiplication

matrix\_product = A%\*%B

matrix\_product

#Install and load imager package

install.packages('imager')

library('imager')

image=load.image(file.choose('header-gradbus51.jpg'))

image

plot(image)

# Gtrends data for Apple 2019

install.packages('gtrendsR', dependencies = T)

library('gtrendsR')

Apple = gtrends("Apple", time = "2019-01-01 2019-12-31")

Apple$interest\_over\_time

Gtrends = plot(Apple$interest\_over\_time$date, Apple$interest\_over\_time$hits, type = 'o', xlab = "Date", ylab = "No. of hits", col = "forestgreen")

# Loading weekly prices from Yahoo for Apple 2019

APPL = read.csv(file = "/Users/sunayanababudas/Desktop/AAPL\_weekly.csv", header = TRUE, sep = ",")

APPL

Open = plot(APPL$Open, type = "o", col = "darkblue", xlab = "Index", ylab = "Open Prices")

Results Screenshot:

**Matrix multiplication**

A close up of a piece of paper

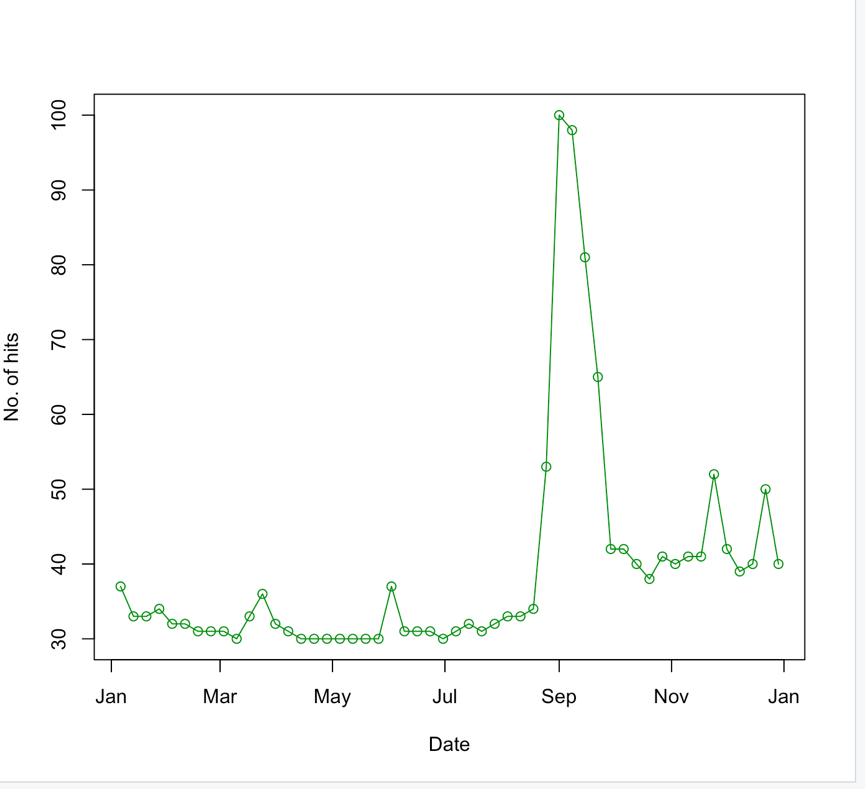
Description automatically generated

**ABH image**

A screenshot of a cell phone

Description automatically generated

**Google trends info for Apple - 2019**



**Yahoo prices for Apple – 2019**

**A close up of a map

Description automatically generated**

**Comments:**

As seen above in the two graphs, there is no correlation or a significant relationship between the two graphs. This is because regardless of the no. of hits, the open prices keep rising and there is nothing in the Google trends plot that can explain the sudden dip in opening prices in the middle.