Stock Prices Change

Code

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```
# import libraries
library(dplyr)
library(readxl)
library(ggplot2)
library(quantmod)
library(timetk)
library(magrittr)
library(Hmisc)
```

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```
head(AMZN)
```

```
           AMZN.Open AMZN.High AMZN.Low AMZN.Close AMZN.Volume AMZN.Adjusted
2020-02-03   2010.60   2048.50  2000.25    2004.20     5899100       2004.20
2020-02-04   2029.88   2059.80  2015.37    2049.67     5289300       2049.67
2020-02-05   2071.02   2071.02  2032.00    2039.87     4376200       2039.87
2020-02-06   2041.02   2056.30  2024.80    2050.23     3183000       2050.23
2020-02-07   2041.99   2098.53  2038.10    2079.28     5095300       2079.28
2020-02-10   2085.01   2135.60  2084.96    2133.91     5056200       2133.91
```

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```
head(BA)
```

```
           BA.Open BA.High BA.Low BA.Close BA.Volume BA.Adjusted
2020-03-02  279.54  291.71 274.29   289.27  11012300      289.27
2020-03-03  292.00  297.44 278.08   280.62   7499300      280.62
2020-03-04  284.55  285.91 277.01   283.12   6986100      283.12
2020-03-05  275.79  276.31 259.65   260.37  14669100      260.37
2020-03-06  253.70  264.29 249.80   262.33  12861800      262.33
2020-03-09  238.00  241.48 224.37   227.17  11585500      227.17
```

I can merge the two datasets together become a new dataset about the Covid-19 pandemic. But since the data type of date is not numeric, so I need to remove the column to calulate the correlation.

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```
Covid_data <- merge(Confirmed_Cases, Dead_Cases, by="Date")
head(Covid_data)
```

Date	Confirmed	Dead
<date>	<dbl>	<dbl>

	Date <date>	Confirmed <dbl>	Dead <dbl>
1	2020-01-22	555	17
2	2020-01-23	654	18
3	2020-01-24	941	26
4	2020-01-25	1434	42
5	2020-01-26	2118	56
6	2020-01-27	2927	82

6 rows

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```
new <- within(Covid_data, rm("Date"))
new
```

Confirmed <dbl>	Dead <dbl>
555	17
654	18
941	26
1434	42
2118	56
2927	82
5578	131
6166	133
8234	171
9927	213

1-10 of 148 rows Previous **1** 2 3 4 5 6 … 15 Next

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```
rcorr(as.matrix(new))
```

```
          Confirmed Dead
Confirmed      1.00 0.99
Dead           0.99 1.00

n= 148


P
          Confirmed Dead
Confirmed            0
Dead       0
```

After the correlation, I plot the stock market prices time series graph below. I used Amazon stock market data.

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```
start <- as.Date("2020-02-01")
end <- as.Date("2020-06-01")
getSymbols("AMZN", src = "yahoo", from = start, to = end)
```

```
[1] "AMZN"
```

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```
plot(AMZN[, "AMZN.Close"], main = "AMZN")
```