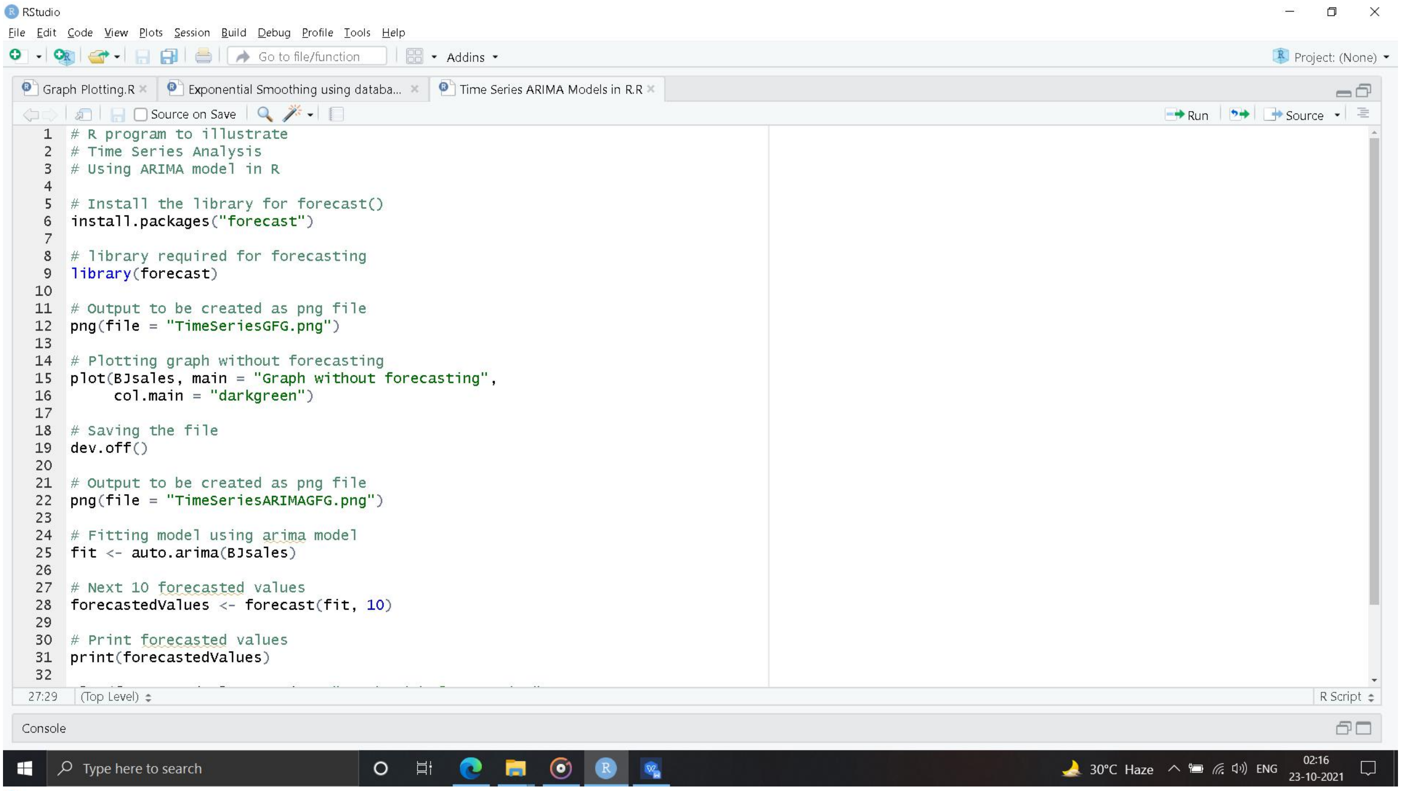
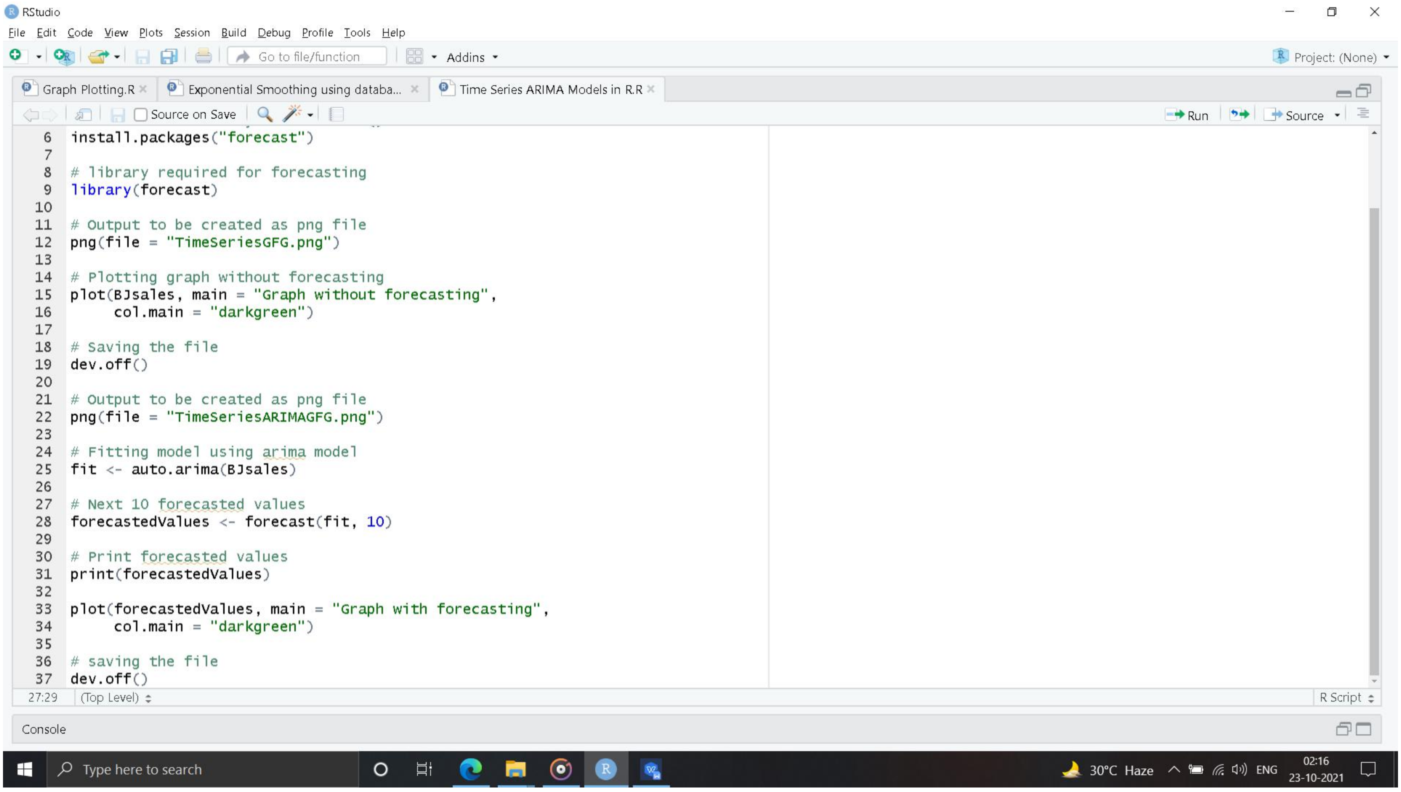
ARIMA using Data set in R

-- Jay Rathod

Code:



```
# R program to illustrate
# Time Series Analysis
# Using ARIMA model in R

# Install the library for forecast()
install.packages("forecast")

# library required for forecasting
library(forecast)

# Output to be created as png file
png(file = "TimeSeriesGFG.png")

# Plotting graph without forecasting
plot(BJsales, main = "Graph without forecasting",
     col.main = "darkgreen")

# Saving the file
dev.off()

# Output to be created as png file
png(file = "TimeSeriesARIMAGFG.png")

# Fitting model using arima model
fit <- auto.arima(BJsales)

# Next 10 forecasted values
forecastedValues <- forecast(fit, 10)

# Print forecasted values
print(forecastedValues)

```



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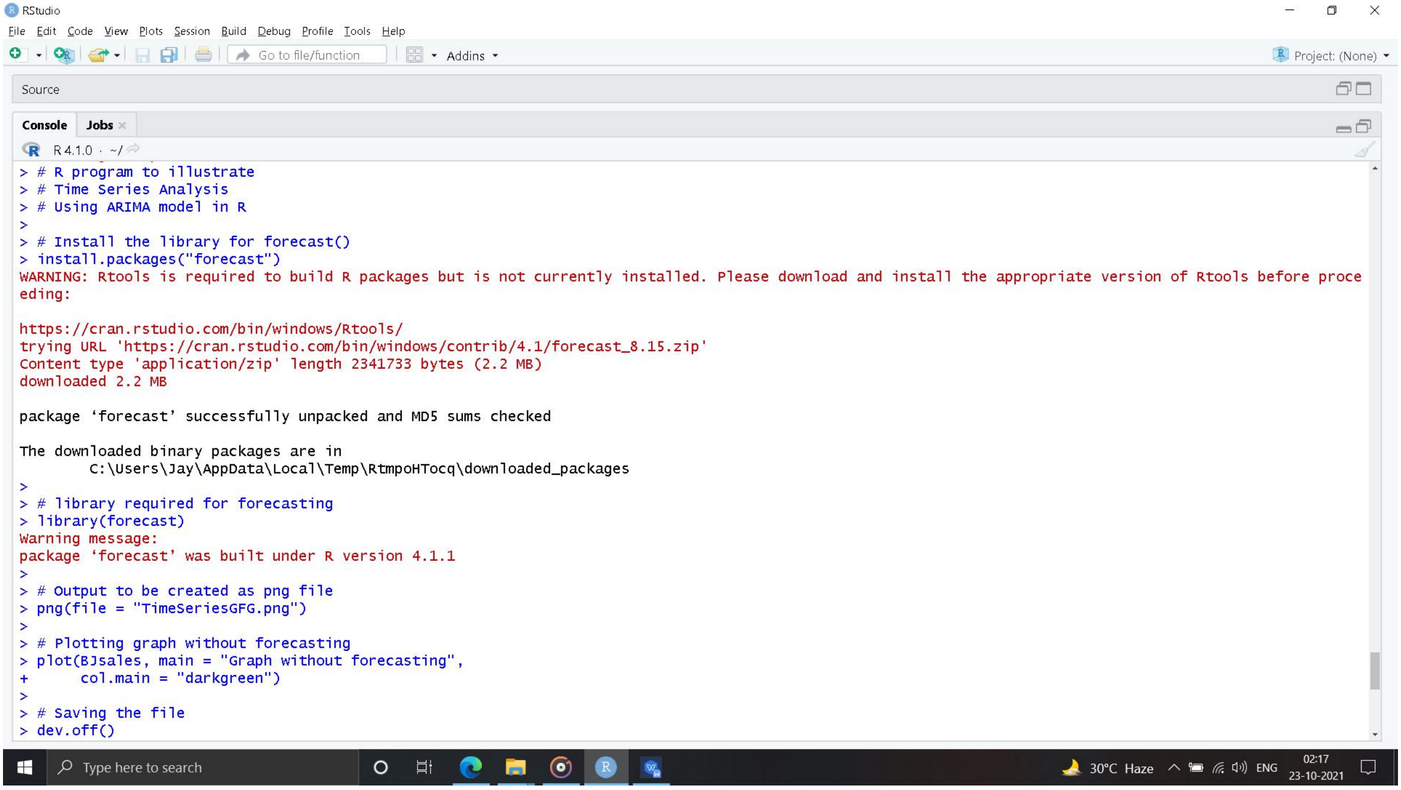
Output:



```
> # R program to illustrate
> # Time Series Analysis
> # Using ARIMA model in R
>
> # Install the library for forecast()
> install.packages("forecast")
WARNING: Rtools is required to build R packages but is not currently installed. Please download and install the appropriate version of Rtools before proce
eding:

https://cran.rstudio.com/bin/windows/Rtools/
trying URL 'https://cran.rstudio.com/bin/windows/contrib/4.1/forecast_8.15.zip'
Content type 'application/zip' length 2341733 bytes (2.2 MB)
downloaded 2.2 MB

package ‘forecast’ successfully unpacked and MD5 sums checked

The downloaded binary packages are in
        C:\Users\Jay\AppData\Local\Temp\RtmpoHTocq\downloaded_packages
>
> # library required for forecasting
> library(forecast)
Warning message:
package ‘forecast’ was built under R version 4.1.1
>
> # Output to be created as png file
> png(file = "TimeSeriesGFG.png")
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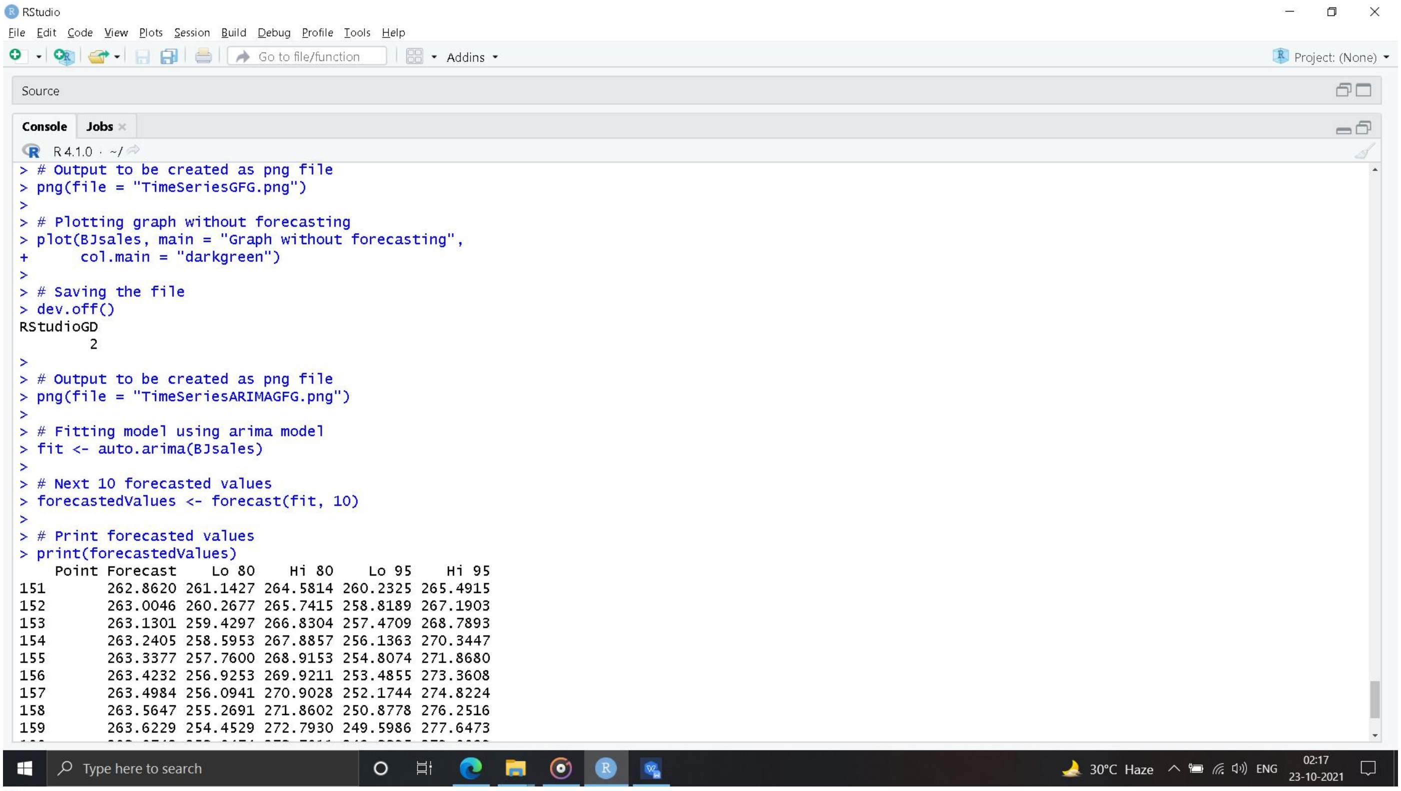

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RStudioGD
        2
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> print(forecastedValues)
    Point Forecast    Lo 80    Hi 80    Lo 95    Hi 95
151       262.8620 261.1427 264.5814 260.2325 265.4915
152       263.0046 260.2677 265.7415 258.8189 267.1903
153       263.1301 259.4297 266.8304 257.4709 268.7893
154       263.2405 258.5953 267.8857 256.1363 270.3447
155       263.3377 257.7600 268.9153 254.8074 271.8680
156       263.4232 256.9253 269.9211 253.4855 273.3608
157       263.4984 256.0941 270.9028 252.1744 274.8224
158       263.5647 255.2691 271.8602 250.8778 276.2516
159       263.6229 254.4529 272.7930 249.5986 277.6473
```

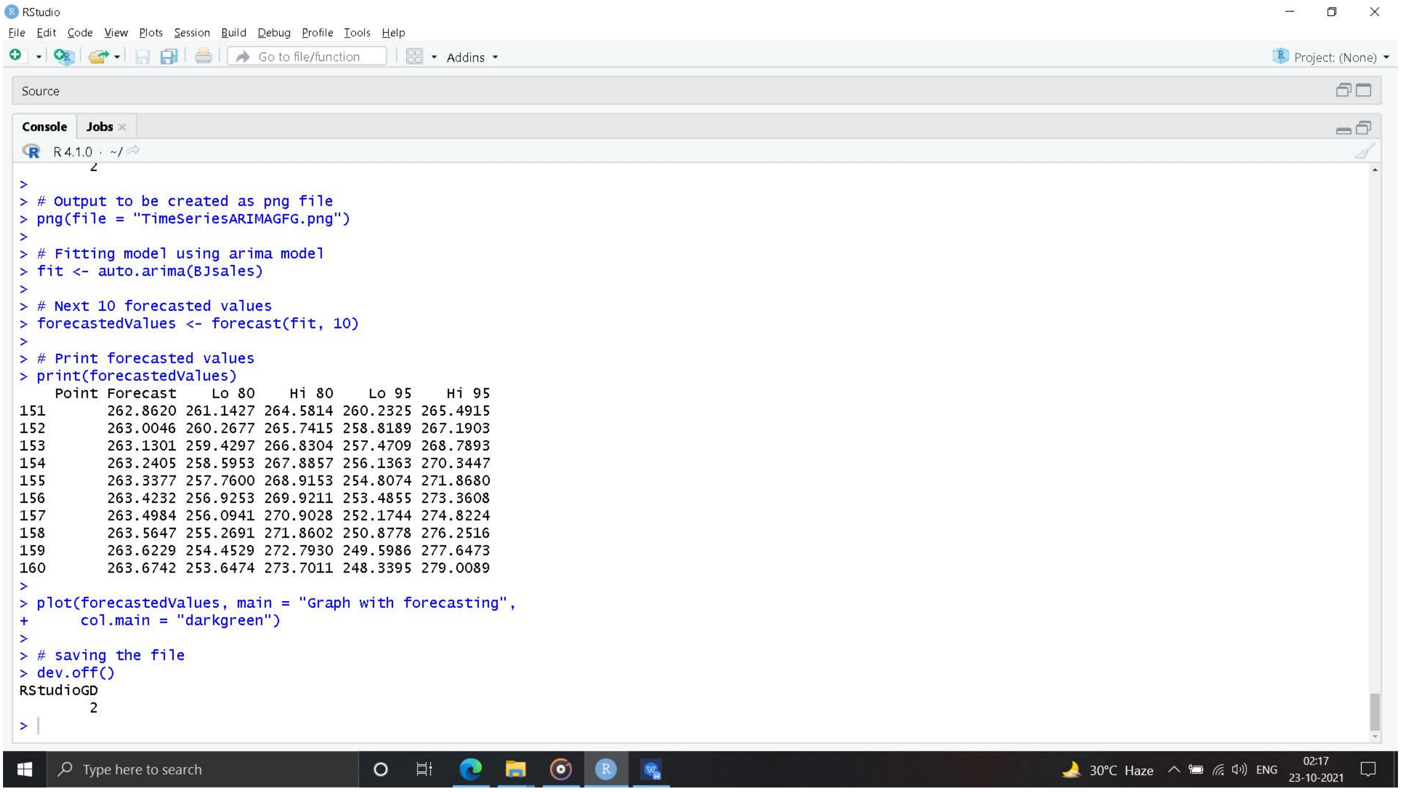

```
        2
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158       263.5647 255.2691 271.8602 250.8778 276.2516
159       263.6229 254.4529 272.7930 249.5986 277.6473
```

```
160       263.6742 253.6474 273.7011 248.3395 279.0089
>
> plot(forecastedValues, main = "Graph with forecasting",
+      col.main = "darkgreen")
>
> # saving the file
> dev.off()
RStudioGD
        2
> |
```