ASSIGNMENT 5 ARIMA AND ARMA

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An ARMA model, or Autoregressive Moving Average model, is used to describe weakly [stationary](https://www.statisticshowto.datasciencecentral.com/stationarity/)[stochastic](https://www.statisticshowto.datasciencecentral.com/stochastic-model/)[time series](https://www.statisticshowto.datasciencecentral.com/timeplot/) in terms of two [polynomials](https://calculushowto.com/polynomial-function-degrees/). The first of these polynomials is for [autoregression](https://www.statisticshowto.datasciencecentral.com/autoregressive-model/" \t "_blank), the second for the [moving average](https://www.statisticshowto.datasciencecentral.com/moving-average/).

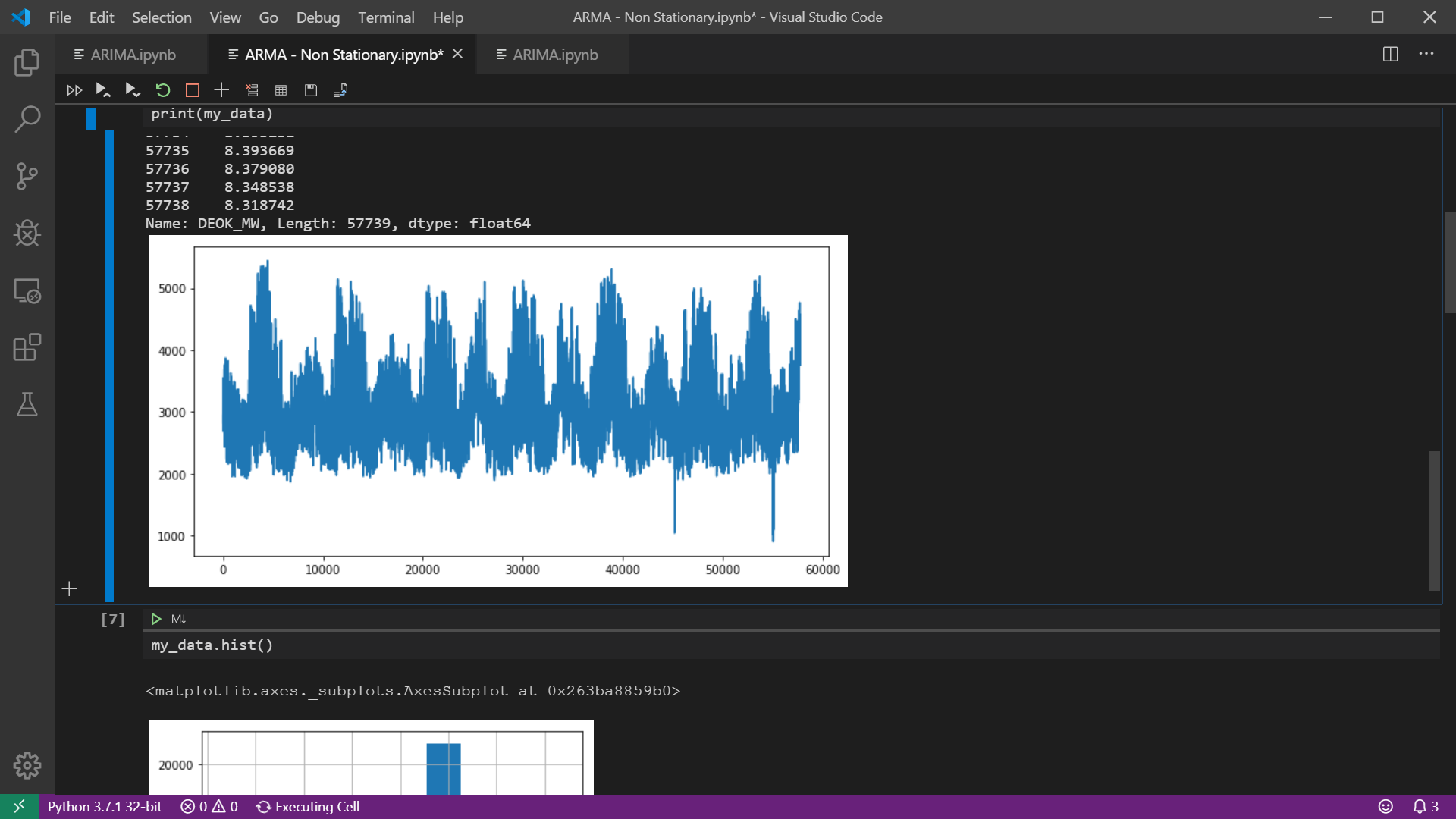
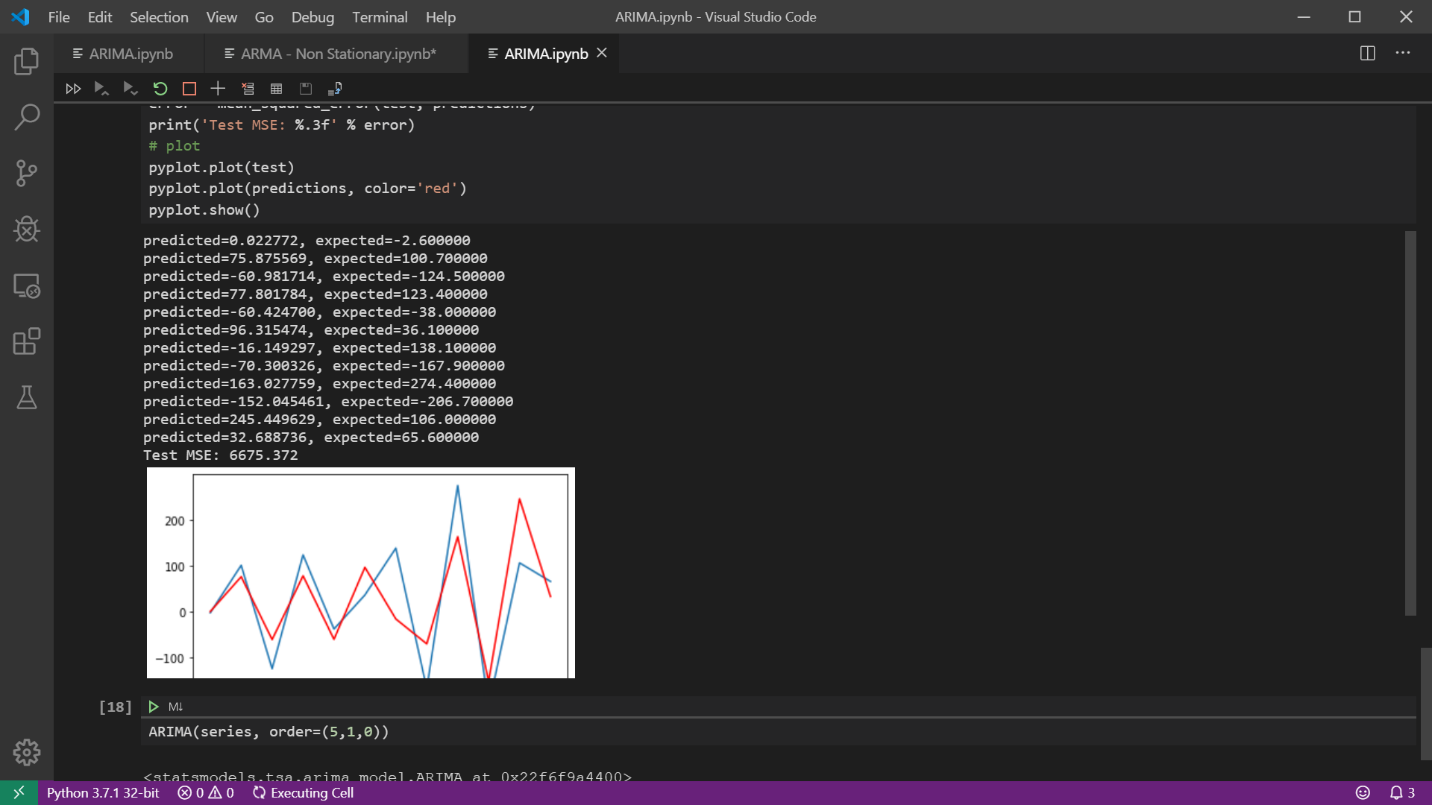
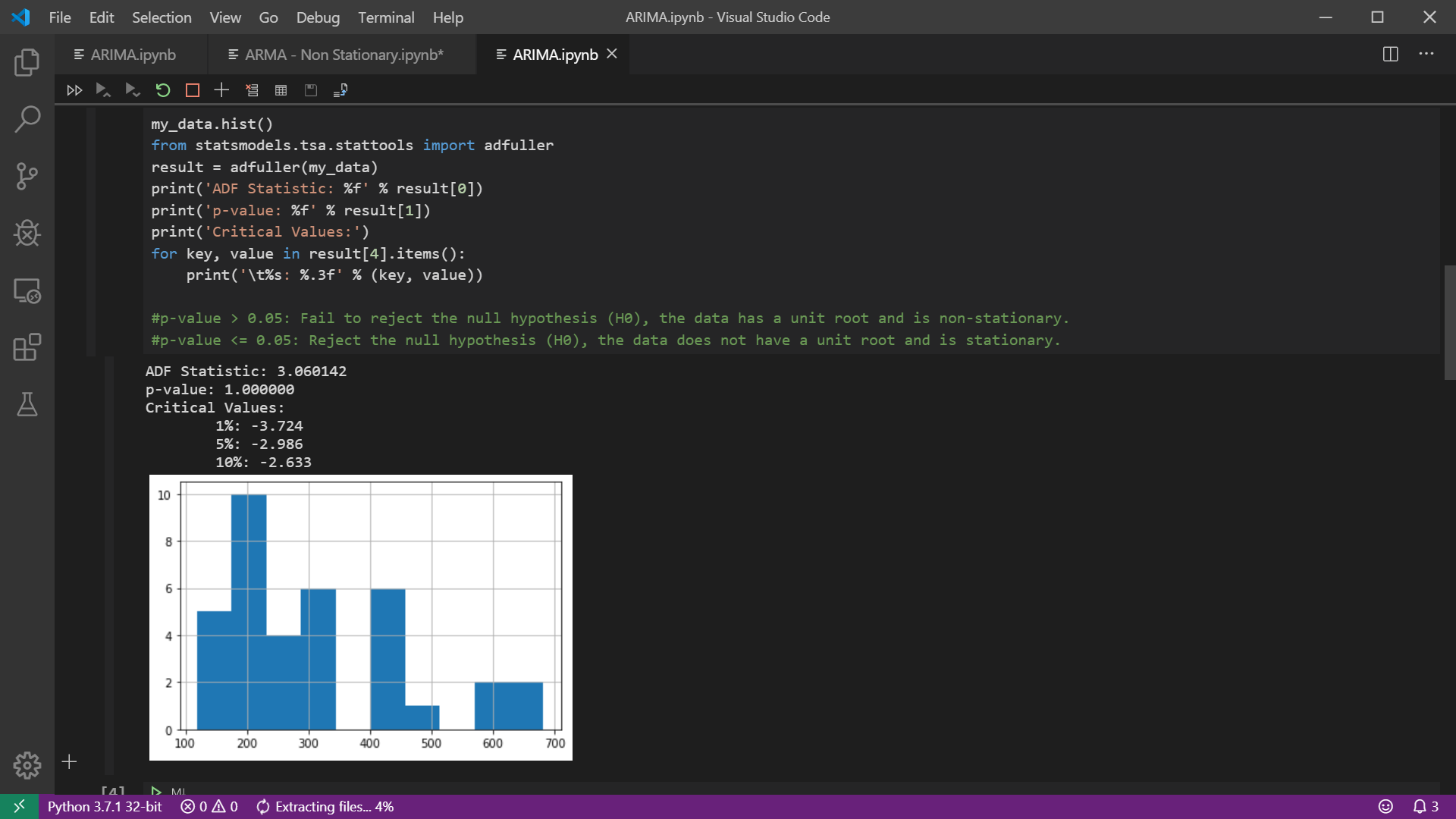
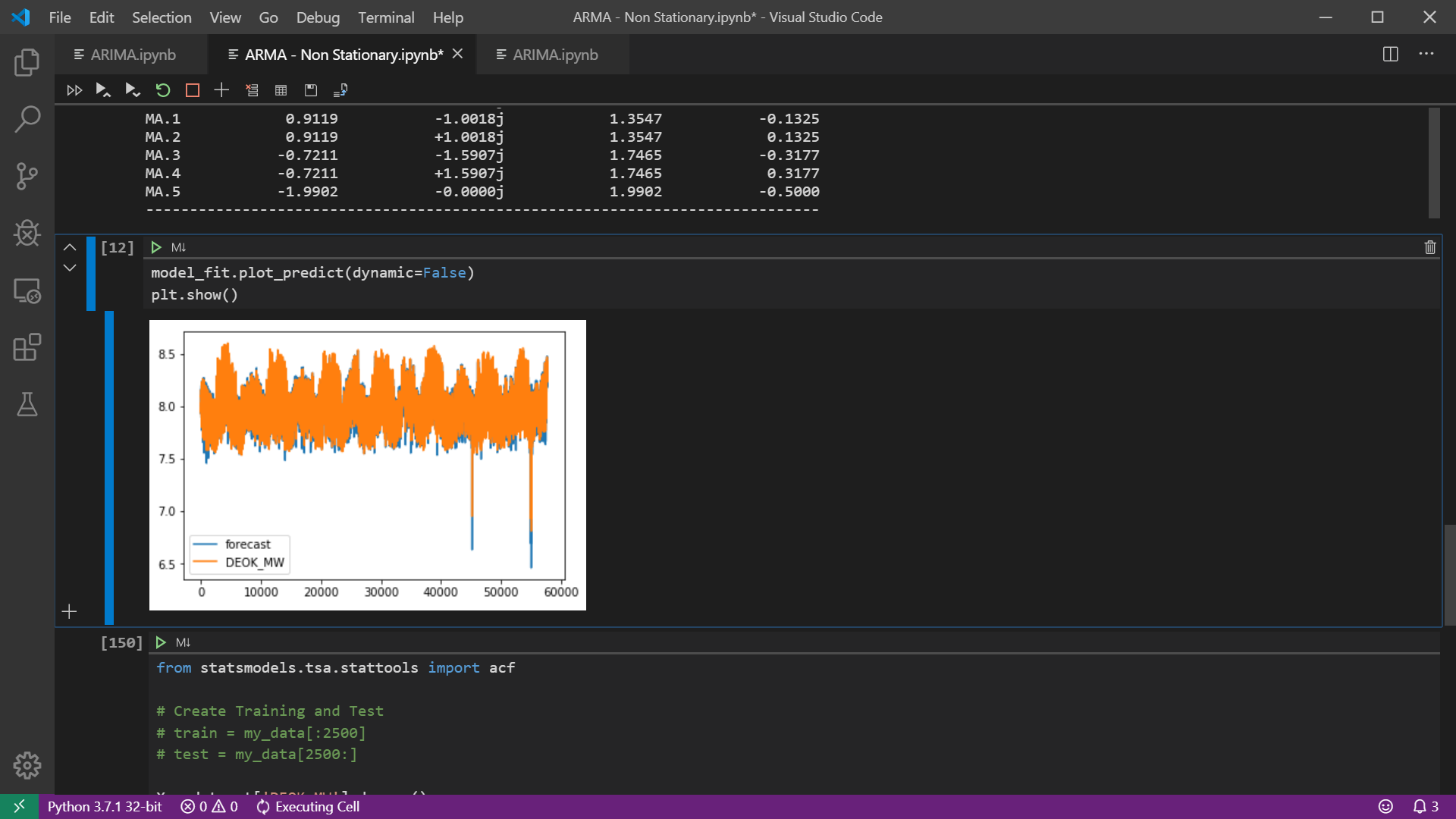
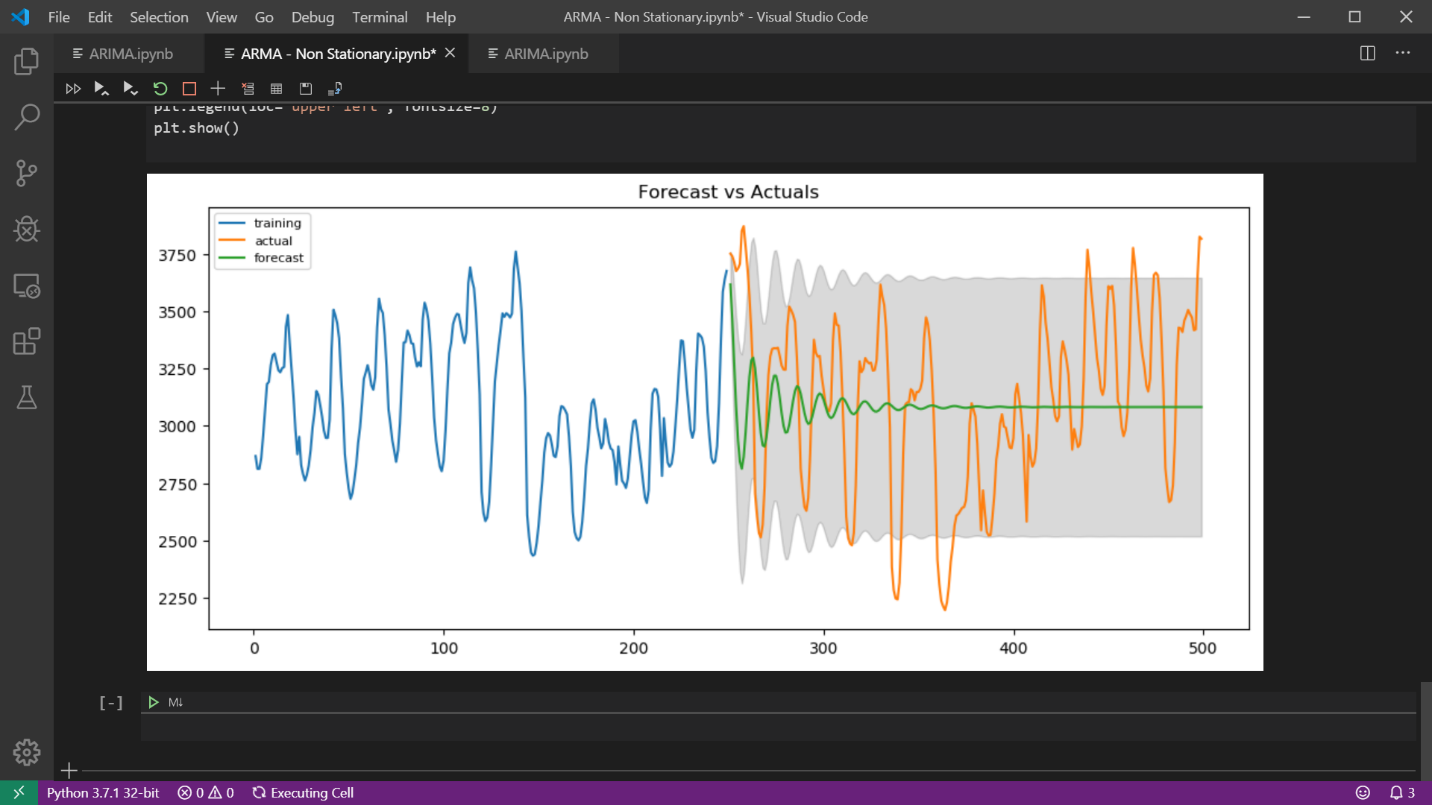
Often this model is referred to as the **ARMA(p,q) model**; where:

* p is the order of the autoregressive polynomial,
* q is the order of the moving average polynomial.

The equation is given by:  
[arma model](https://www.statisticshowto.datasciencecentral.com/wp-content/uploads/2018/09/arma.jpeg)  
  
Where:

* φ = the autoregressive model’s parameters,
* θ = the moving average model’s parameters.
* c = a constant,
* ε = error terms (white noise).

***Screenshots:***

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