Report to project 5

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Dataset:

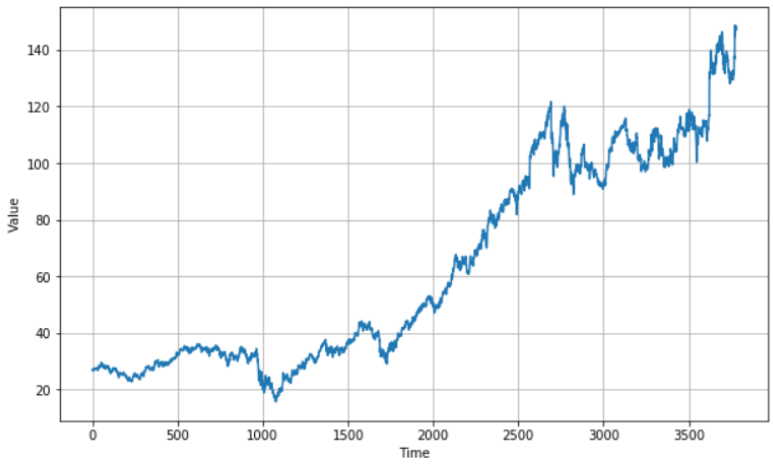
As a dataset taken last 10 years stock prices of the " The Walt Disney Company" from https://finance.yahoo.com/ website. The data consists of 3779 observations. We divide our dataset to train (3000) and test (779). In the graph, time in days and prices of stocks are represented by horizontal and vertical axis, respectively.

Models:

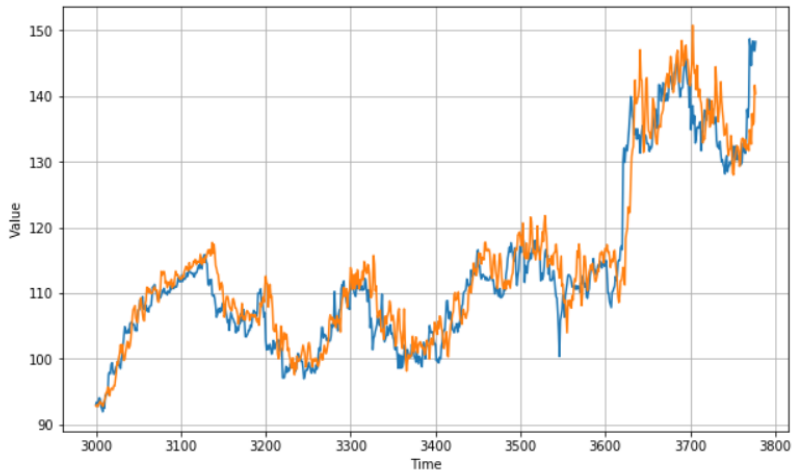
Following table consist results of different models. Prediction of stock prices was done by using 5 different models. They are models which we covered in our course: Moving Average, Bidirectional LSTM, Simple RNN, 1D Convolutional with LSTM, and the neural network (NN).

Model	Mean Absolute Error
Regression Model	3.037
Moving Average Model	3.122
Feed Forward Neural Network	3.037
Reccurent Neural Network	2.03
1DCNN +LSTM	5.92
Bi-LSTM	48.69

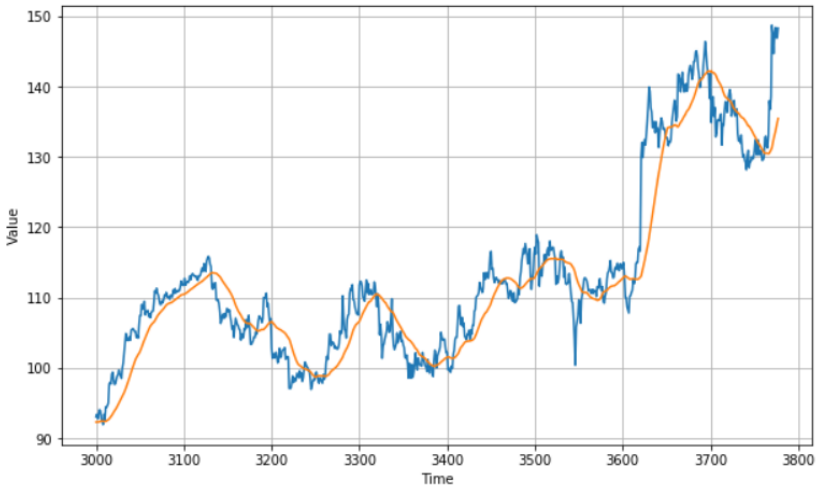
Real Data



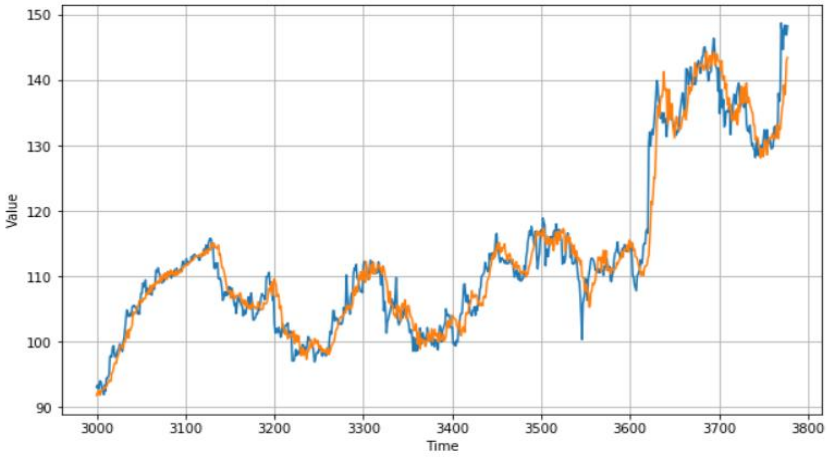
Regression



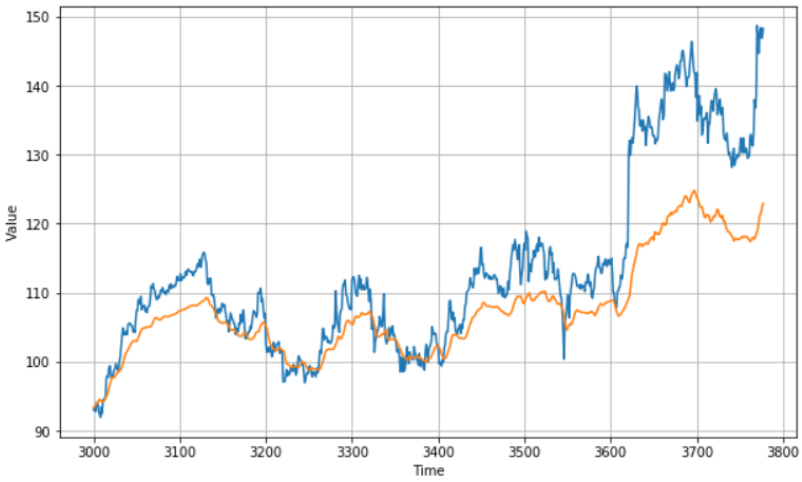
Moving Average



FFNN and RNN



LSTM +1DCNN



Conclusion:

From the graph and table above it is seen that the best results are showed by Moving average model. The worst model is Bidirectional LSTM. They could not predict well the prices of stocks of The Walt Disney Company. The result demonstrate FFNN and RNN outperforms Moving average model. The best approach was to use modeling average model, while Simple RNN and Bidirectional LSTM could not give good predictions.