````
---
title: "Stock Report"
author: "Brad Boehmke"
date: '`r Sys.Date()`'
output: html_document
params:
  symbol:
    choices:
    - AMZN
    - GOOG
    - FB
    value: AMZN
---

# Stock: `r params$symbol`

```{r, message=FALSE, echo=FALSE}
# Packages used - run the next two lines of code if you do not have
these
# packages installed on your computer
# pkgs <- c("xts", "quantmod")
# install.packages(pkgs)
library(xts)
library(quantmod)

# load data
prices <- getSymbols(params$symbol, auto.assign = FALSE)

# get the most recent opening & closing prices
move <- Cl(last(prices)) - Op(last(prices))
```


## Recommendation: `r ifelse(move > 0, "BUY", "SELL")`

`r params$symbol` will `r ifelse(move > 0, "increase", "decrease")` in
price during the next trading period.


## Price History

The chart below is made with the `quantmod` R package, a widely used
package for collecting and visualizing financial data in R. You can
learn more about `quantmod` at the website [www.quantmod.com]
(rstudio.github.io/DT/).

***

```{r, echo=FALSE, fig.align='center', fig.width=9}
# plot historical stock prices
````
````

```
chartSeries(prices, theme = chartTheme("white", bg.col = "white"))
```

Method

This forecast was predicted with the *recency algorithm*, a simple---probably useless---method for determining stock prices. The recency algorithm predicts that the next price movement, M_{j}, will be in the same direction as the most recent price movement. M_{i}.

$$M_{i}= Close_{i} - Open_{i}$$

$$
    M_{j}=
        \begin{cases}
                > 0, & \text{if } M_{i} > 0\\
                \leq 0, & \text{if } M_{i}\leq 0
        \end{cases}
$$

Raw Data

The table below displays the daily price data for the stock. In the next section, we will learn how to make a concise, interactive table with the `DT` package, a new package for making searchable data tables. You can learn more about the `DT` package at the website rstudio.github.io/DT/.

***

```{r, echo=FALSE, comment=' '}
# show stock info for last 7 days
knitr::kable(tail(prices, 7)[, 1:5], caption = 'Stock information for last 7 business days')
```