There are 4 different files:

1. Indicators.py

This file contains the codes for various technical indicators (SMA, bband, momentum, vol)

sma = sma(price, n)

bbp = bband(price, n, chart=False)

momentum = momentum(price, n, chart=False)

vol = vol(price, n)

Each of the above function will take in price data frame and return the corresponding data frame of that indicator.

1. BestPossibleStrategy.py

This file has 2 functions: testPolicy and testCode

* df\_trades = testPolicy (symbol = "AAPL", sd=dt.datetime(2010,1,1), ed=dt.datetime(2011,12,31), sv = 100000)

This function will return df\_trades (A data frame whose values represent trades for each day. Legal values are +1000.0 indicating a BUY of 1000 shares, -1000.0 indicating a SELL of 1000 shares, and 0.0 indicating NOTHING. Values of +2000 and -2000 for trades are also legal so long as net holdings are constrained to -1000, 0, and 1000)

* testCode(symbol = "AAPL", sd=dt.datetime(2010,1,1), ed=dt.datetime(2011,12,31), sv = 100000, chart = False)

This code will run the testPolicy, take the df\_trades, compute the portvals by calling compute\_portvals() from marketsimcode.py

Then it will run to generate the chart and statistics to compare best possible and benchmark

1. ManualStrategy.py

This file has 2 functions: testPolicy and testCode

* df\_trades = testPolicy (symbol = "AAPL", sd=dt.datetime(2010,1,1), ed=dt.datetime(2011,12,31), sv = 100000)

This function will return df\_trades (A data frame whose values represent trades for each day. Legal values are +1000.0 indicating a BUY of 1000 shares, -1000.0 indicating a SELL of 1000 shares, and 0.0 indicating NOTHING. Values of +2000 and -2000 for trades are also legal so long as net holdings are constrained to -1000, 0, and 1000)

* testCode(symbol = "AAPL", sd=dt.datetime(2010,1,1), ed=dt.datetime(2011,12,31), sv = 100000, chart = False)

This code will run the testPolicy, take the df\_trades, compute the portvals by calling compute\_portvals() from marketsimcode.py

Then it will run to generate the chart and statistics to compare manual strategy and benchmark.

In the ‘\_\_main\_\_’, user can change the InSample flag from True to False to run the OutofSample period.

1. Marketsimcode.py

This code contain the update compute\_portvals that i being called by the manualstrategy.py and bestpossiblestrategy.py

Compute\_portvals now take in the df\_trades (explained above) then compute portfolio vals.