Home assignment – due date….

Extension PG “stochastic and identification”, ASTU.

1. Signal Identification – frequency synthesizer
2. Simulate signal

-. Input Signal:

-. Output: display the frequency synthesizer

-. Verify the frequency of input to be the same frequency of the output in sunthesizer

Hint:

* Generate signal in matlab
* Draw the blocks in Simulink

1. Record sound

* Record any sound but regular sound is better.

Eg. Sound sources: A light bulb sound, a ring sound by a phone,..  
 Records: a laptop, a smartphone, …

If the sound / audio file is in xx.mp3, try the matlab command to read the xx.mp3

>> data = audioread(‘kim.mp3’)

Or you may refer matlab helper.

* Run the simulink previous made to check the frequency of your record signal

1. Tracking the stock price
2. Download the stock price of apple

<https://finance.yahoo.com/quote/AAPL/history?p=AAPL>

save the xx.csv

1. Read the close price
2. Using the moving average window, estimate the trend of the apple stock price

And draw the trend with the close price of apple

1. Using the alpha beta tracker, estimate the trend of the apple stock price. Draw the trend with the close price of apple