#1: Codes in matlab for generating data (a series of x(hidden) and y(observed) values), and then running these values through the nonlinear filter to evaluate changes in the posterior belief on X.

These codes are not perfectly annotated yet, (I will add more comments when I have time),

A few other notes:

§  GenerateRandomBinaryOutcomeS: this function requires two inputs: pmf and z  
  
·         This function compares z to the pmf vector (which is binary here).   
  
·         If z is less than pmf(1), the output is state 1, else output is state 2  
  
§  generateDataWithGivenPiQR\_july18\_v1: this file is used to generate a series of x’s and y’s. this is the “Playing God” file.  
  
  
o    run the code nonlinearfilterElegant\_PlayingGodData and accomplish the following:  
  
§  #1: Play God and generate a sequence of X’s and Y’s  
  
§  #2: Calculate a posterior belief about every X from 1:T,

I have also attached some notes that are in progress, where I am working on providing background, rationale, etc. for what we are doing in matlab and why we are using the nonlinear filter, etc.

these notes are still in progress and somewhat wordy-so I don't know how helpful they will be right now, but you can take a look. and if you have questions, feel free to email me and we can set a time to discuss further.

hope this helps somewhat!