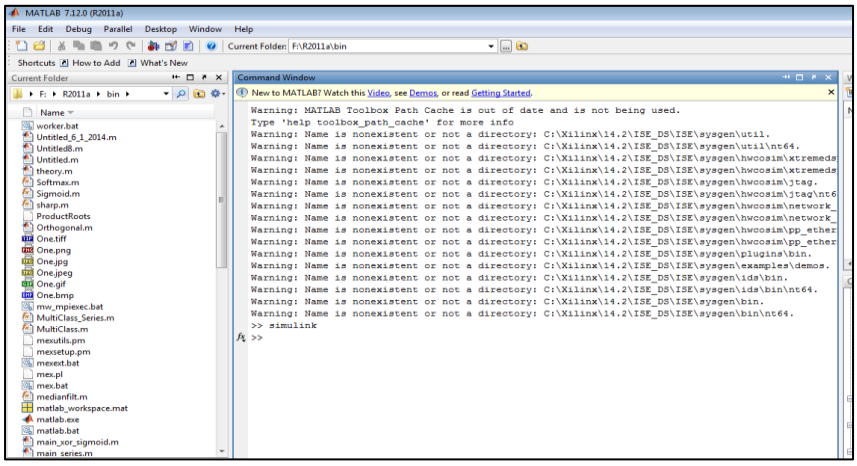
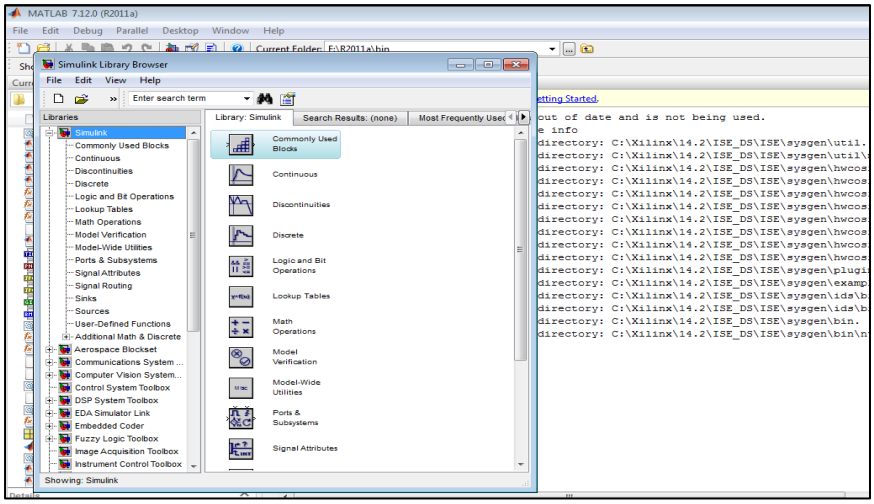
BPSK Modulation Steps in Simulink

Designing steps for BPSK modulator in MATLAB Simulink. Here the basic blocks are : (1) Pulse Generator (2) Sine waveform (3) Switch (4) Constant block & product block (5) Scope (6) MUX

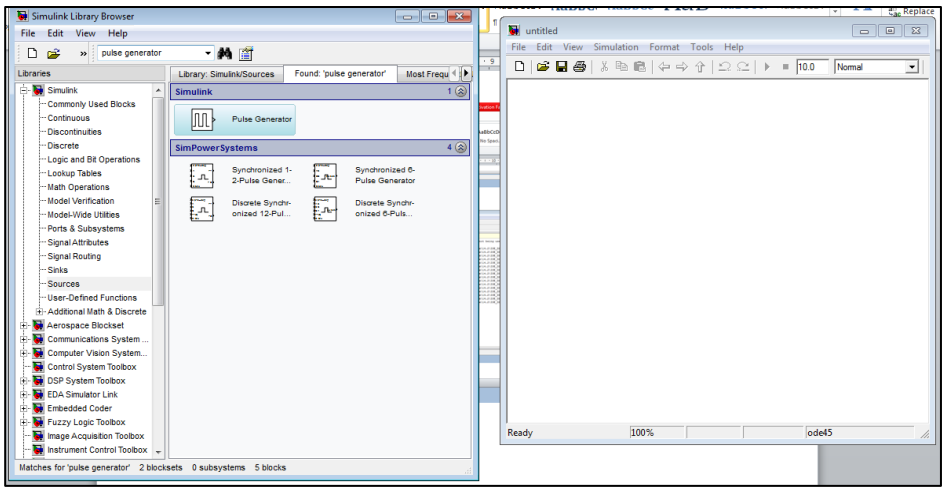
Step 1: Open MATLAB and go in command Window and write **simulink**



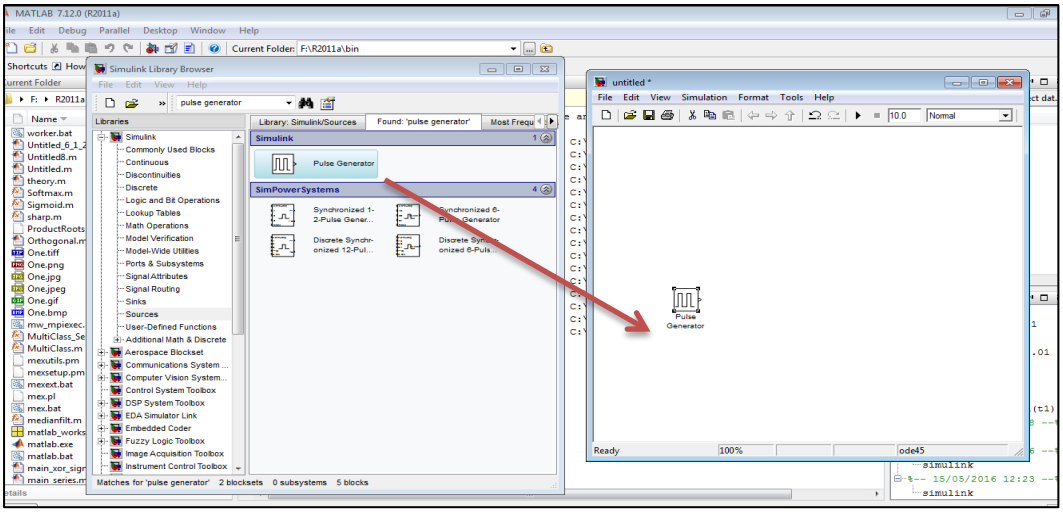
Step-2: First see the Simulink Library Browser from where get the basic blocks of needed.



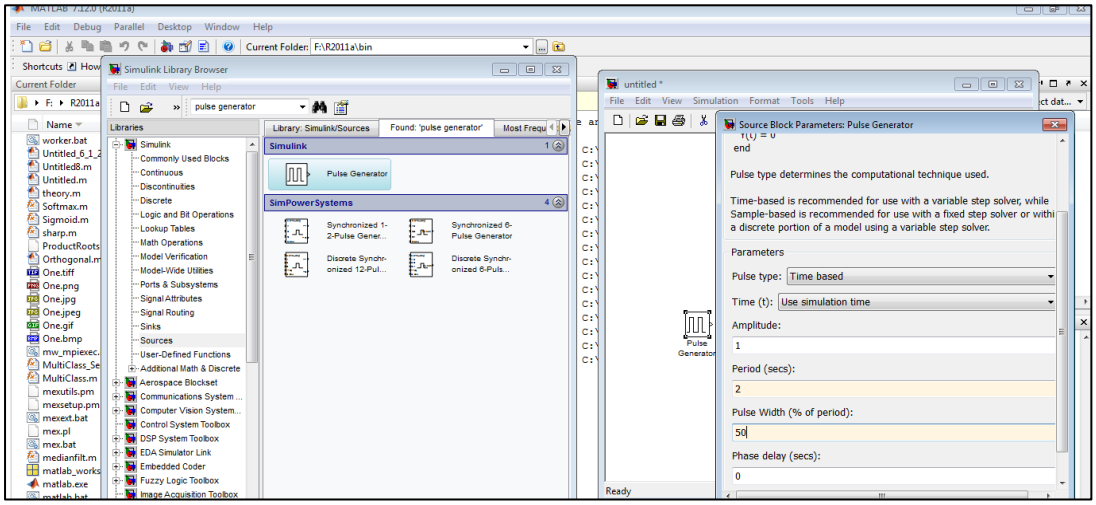
Step-3: Click on New model from Simulink Library Browser and a blank new model window is open. Here we design entire block diagram.



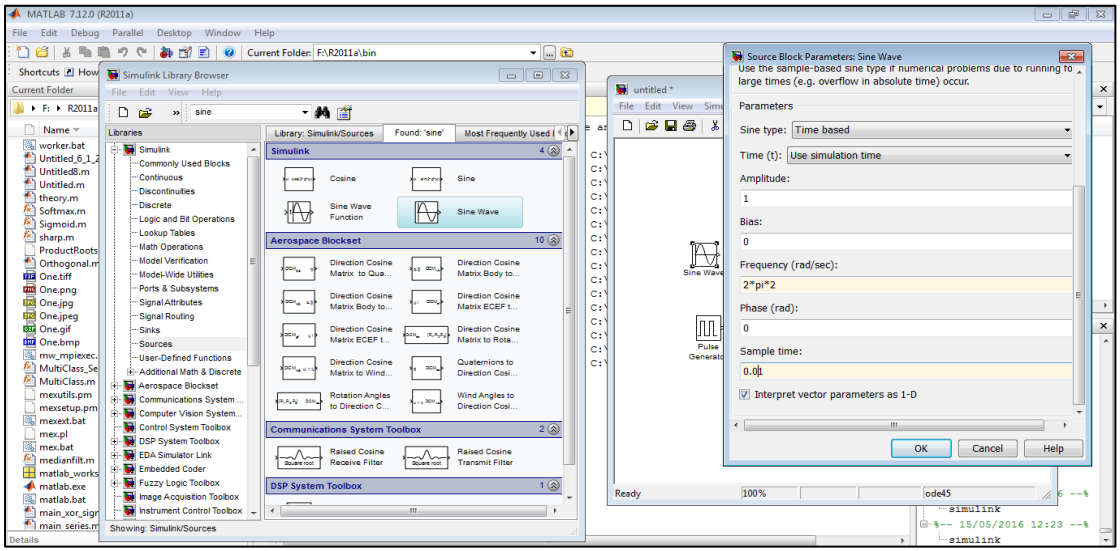
Step-4: To search first block of **Pulse Generator** in searching browser. And drag it from Simulink library browser to new blank model.



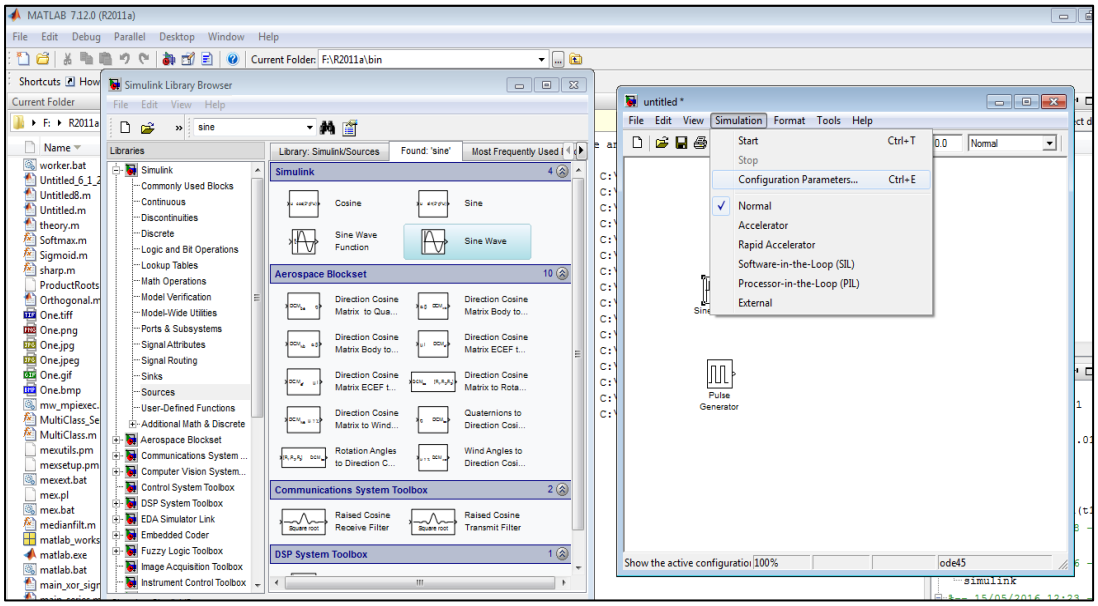
Step-5: Double click on **Pulse Generator** block in new model & change its property; set: Time period=2s, Pulse width = 50%, Amplitude = 1V .



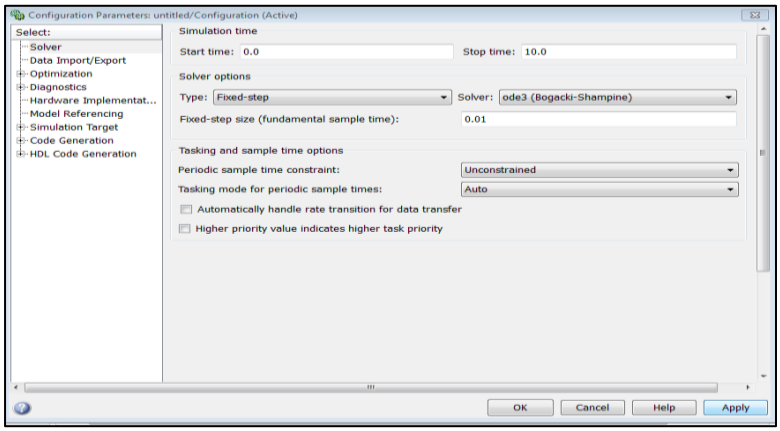
Step-6: Same way take next block **Sine generator** & change its property→ Frequency=2*pi*2 , sampling time=0.01s



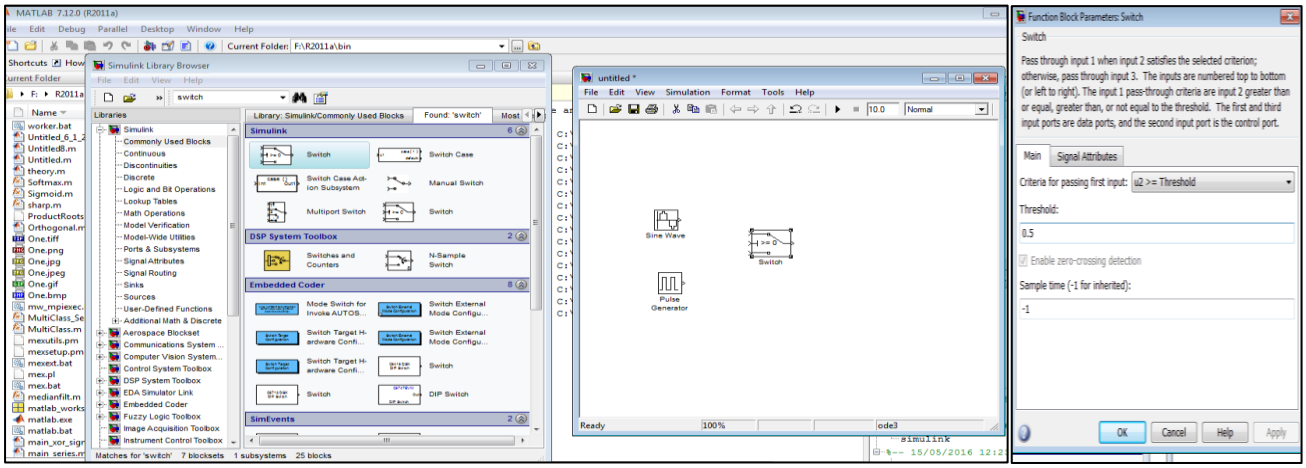
Step-7: Click on **Configuration parameters** from simulation menu.



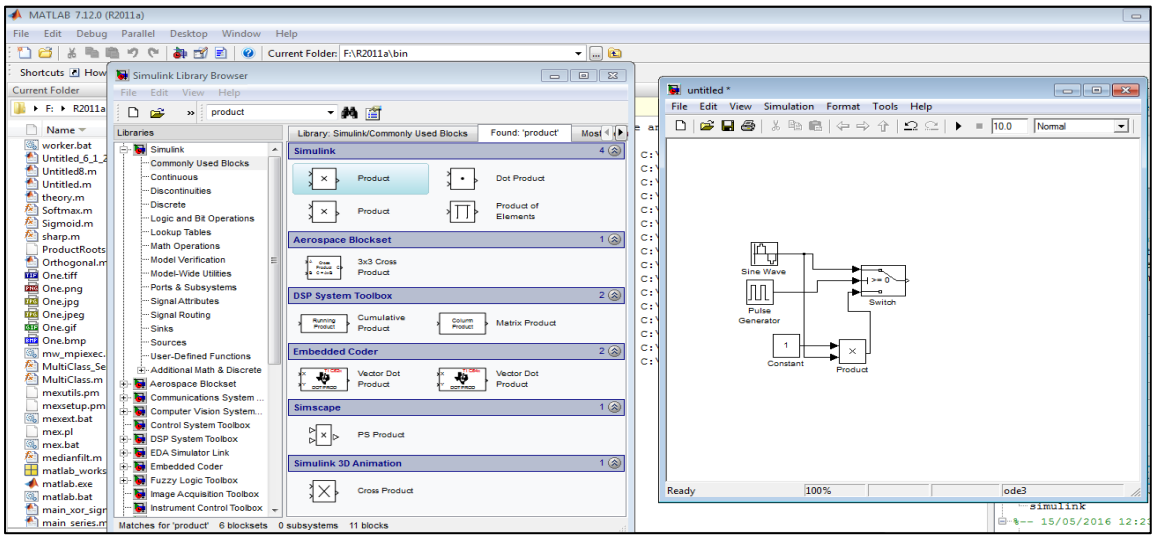
Step-8: When open Configuration window then change value of **Type** is Fixed step and **step size**=0.01. And click on Apply & then OK.



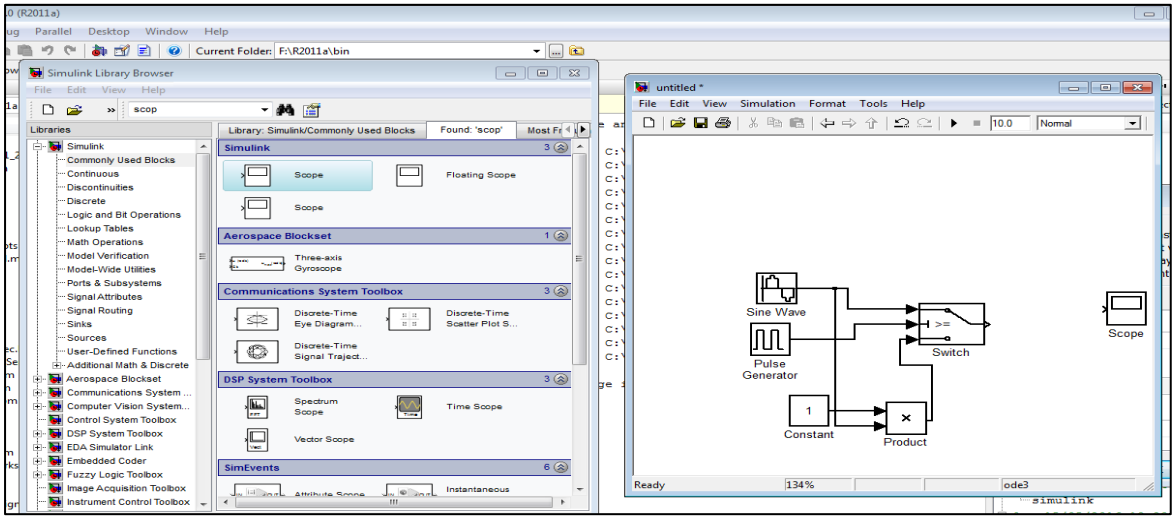
Step-9: Select **Switch** & change its **threshold value=0.5** by double click on it.



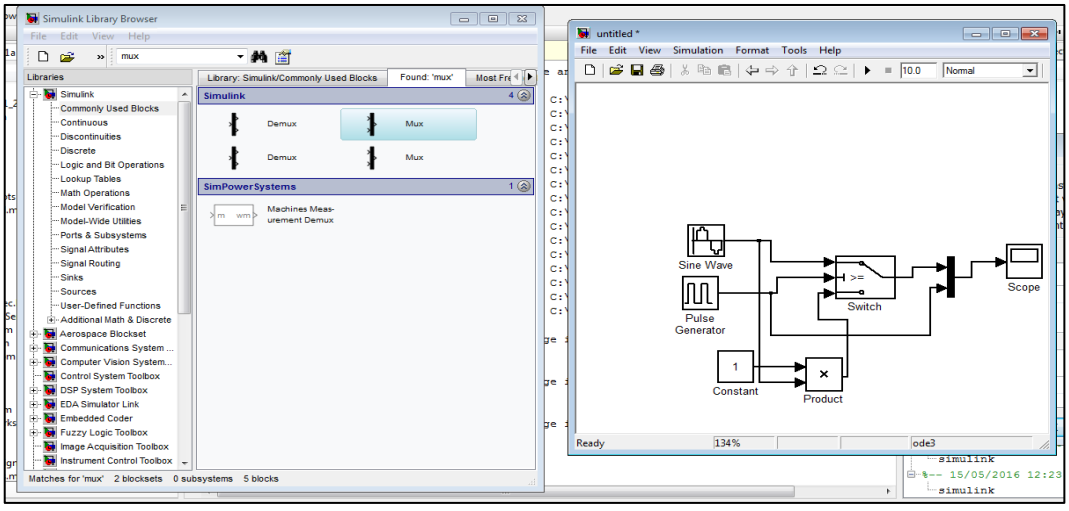
Step-10: Select Constant block & change its value = -1. Then select Product block and connect all components as given below.



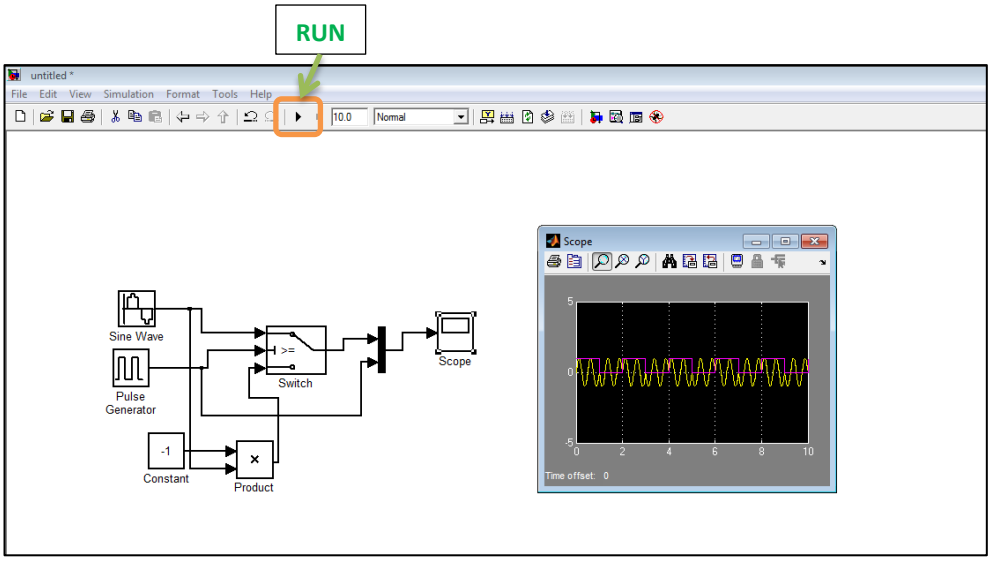
Step-11: Take **Scope** for watching waveform.



Step-12: Take **mux** for watching two waveforms on **Scope,** one is input pulse and second is output of switch.



Step-13: After connecting all the blocks and changing its property, it ready to RUN. Click on Run and watch output.



Step-14: Final diagram of BLOCKs and Waveform.