Lab # 3: Alexander Railton – 250848086

Problem #1:
As the excitatory potential (v_e) input increases the mean membrane potential is increasingly negative and as the inhibatory potential (v_i) increases the membrane potential becomes more positive. When the excitatory potential (v_e) reaches a certain level it overrides the inhibitory potential creating a more negative mean membrane potential. The standard deviations get increasingly small as the excitatory and inhibitory input rates increase. Along with the mean figure(1) we can see that as the membrane potential becomes increasingly negative with greater numbers of excitatory inputs the values of the standard deviation decrease giving a smaller range of values for the membrane potential.