1. **Calculate the Fano factor of the spike count and coefficient of variation of the inter-spike interval for 1000 seconds of spike train with a firing rate of 35 Hz, both with no refractory period and with a refractory period of 5 ms. In the case of the Fano factor the count should be performed over windows of width 10 ms, 50 ms and 100 ms.**

   <u>No refractory period</u>
   Coefficient= 0.9943037607880085
   Fano_factor with 10ms = 1.0074508153961568
   Fano_factor with 50ms = 1.0002063535114547
   Fano_factor with 100ms = 1.0082031161636562

   <u>Refractory period of 5ms</u>
   Coefficient= 0.8249693547606431
   Fano_factor with 10ms = 0.7479260869937494
   Fano_factor with 50ms = 0.6961050189799356
   Fano_factor with 100ms = 0.6993139566743728

2. **Calculate the Fano factor and coefficient of variation for this spike train as for the simulated spike trains of rho**

   Coefficient= 2.0085125289465235
   Fano_factor with 10ms = 1.117680142627936
   Fano_factor with 50ms = 2.9297562848640877
   Fano_factor with 100ms = 4.102959520344769

3.