Question 1: Generate a white noise vector $V_1$ of size 1000 that each of the element has standard normal distribution. Calculate the mean, standard deviation and variance of this vector.

Question 2: Generate a Gaussian white noise matrix $M_1$ of size 10x10 that has mean 3 and variance 5. Calculate the mean and variance of all the values in $M_1$; Calculate the covariance and correlation matrices.

Question 3: Generate a Gaussian white noise matrix $M_2$ of size 10x8 that has mean 0 and standard deviation 5. Calculate the correlation matrix between $M_1$ and $M_2$.

Question 4: Plot $V_1$. Plot the histogram of all the values in $V_1$ and $M_2$ separately, and set bin to 20.