LAB 06
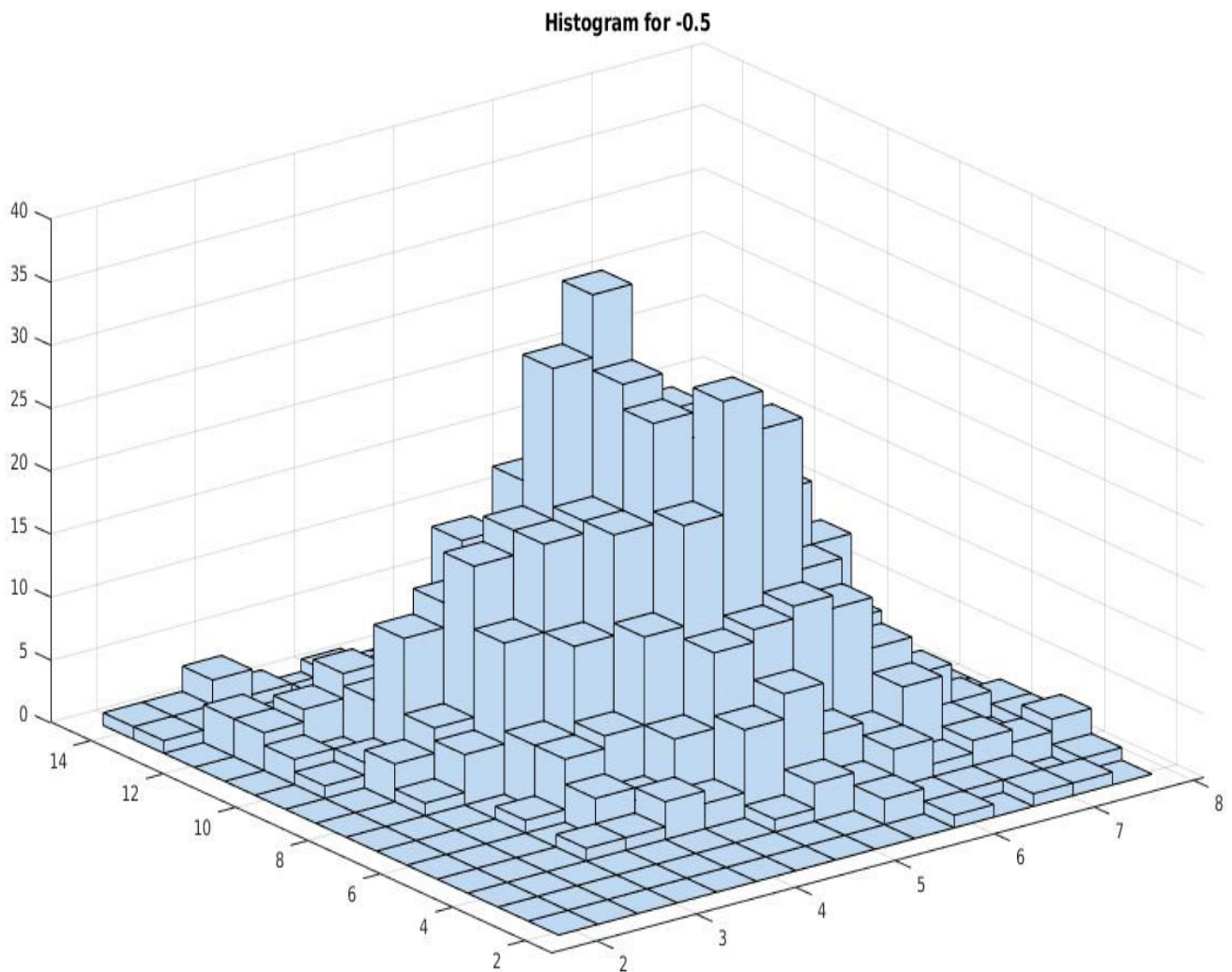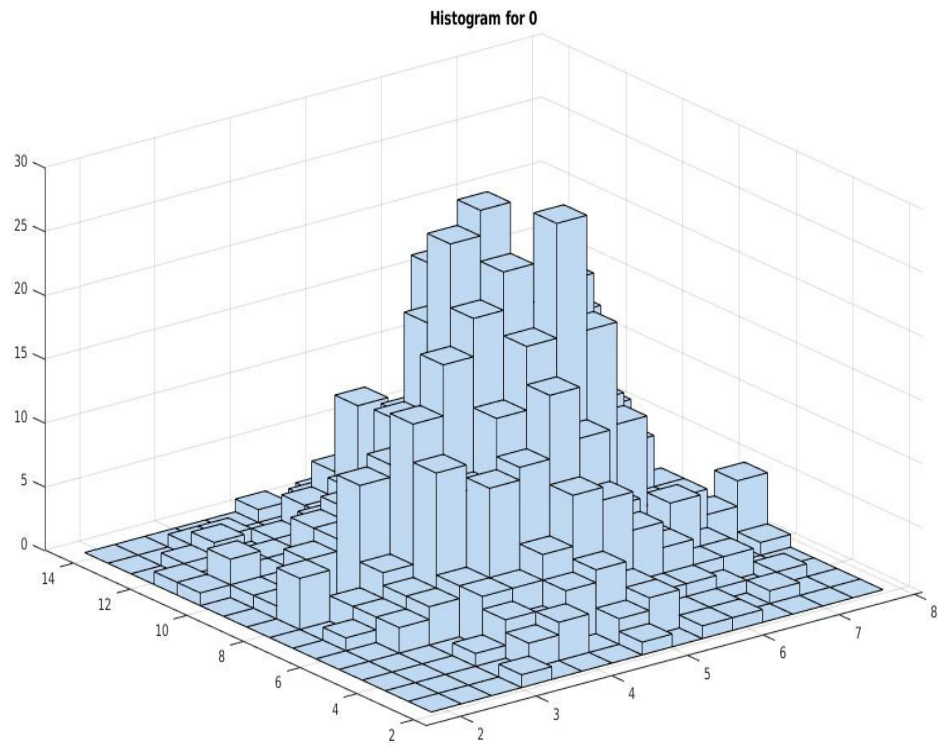
◆ Following histograms were obtained for various values of a and 1000 generated values of X :
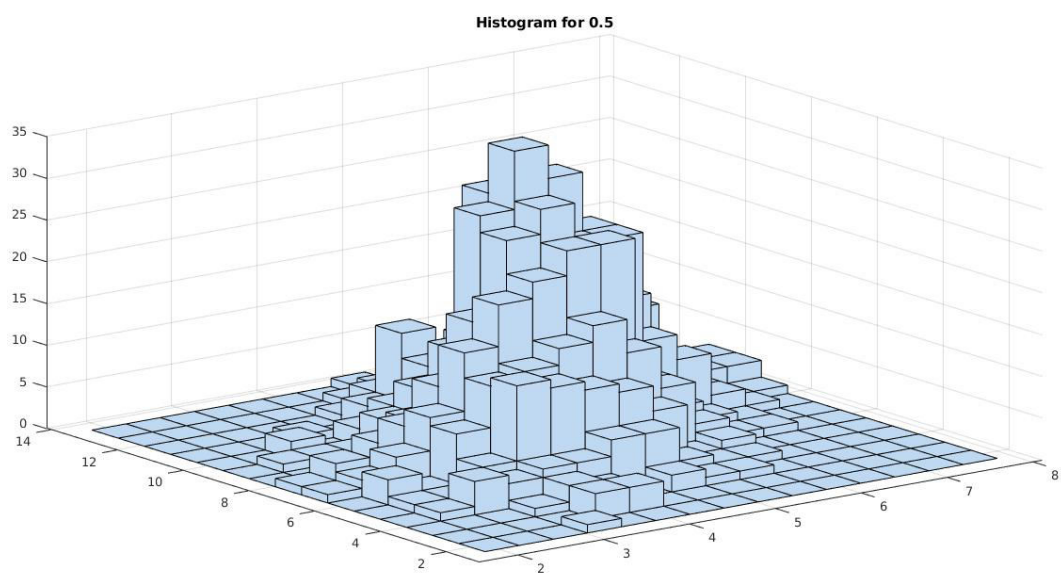
a) a = -0.5

Histogram for -0.5
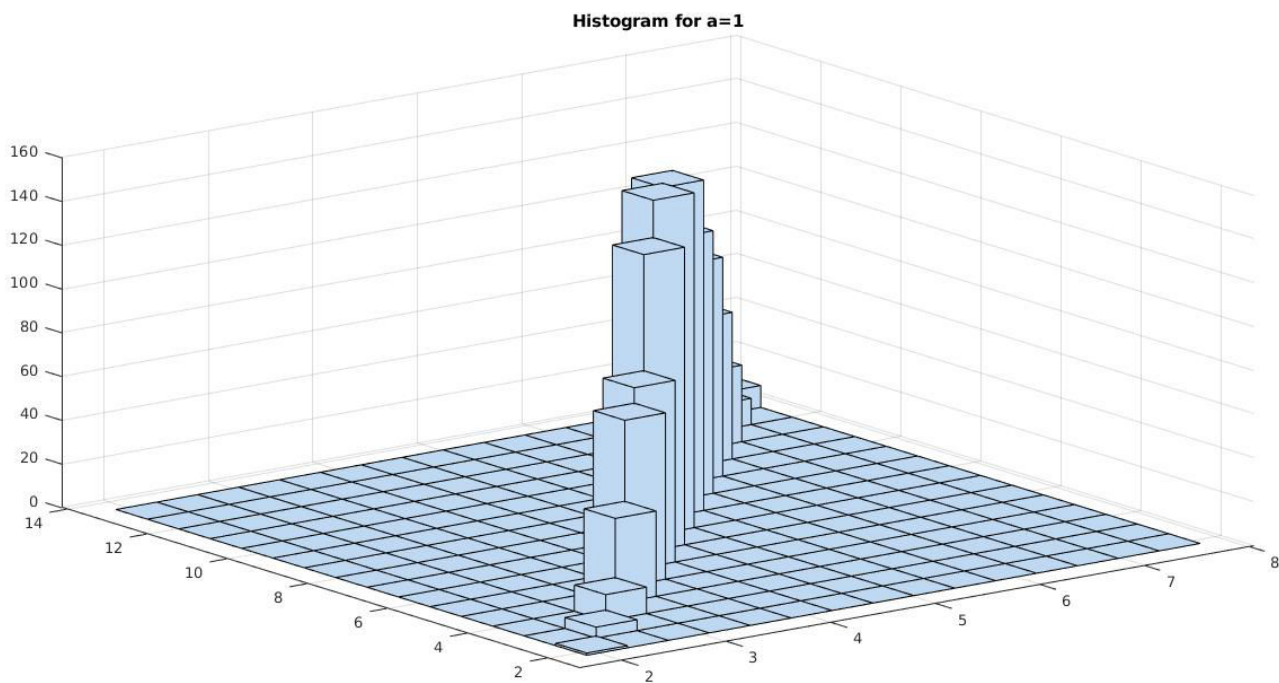
b) a = 0

Histogram for 0
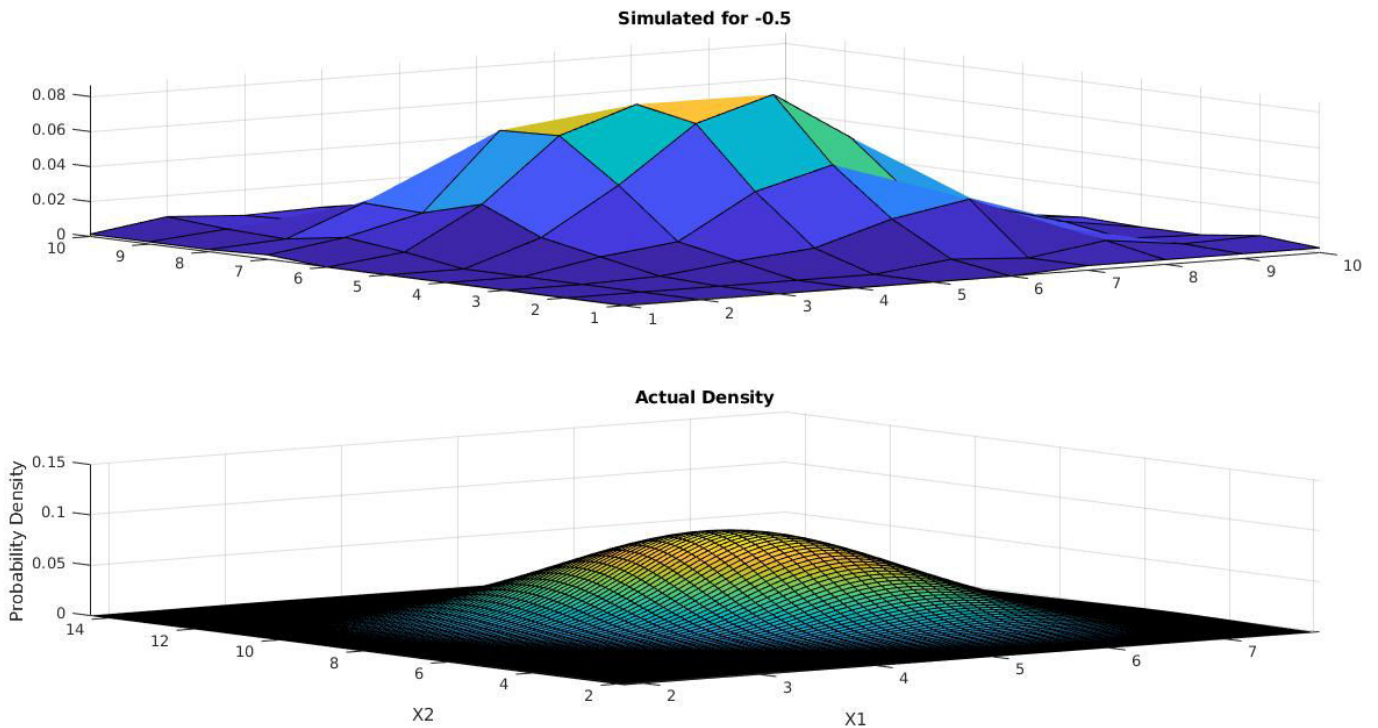
c) a = 0.5

Histogram for 0.5

d) a = 1

Histogram for a=1

Since for a=1,Sigma matrix is singular, it's determinant is zero and it does not qualify as a covariance matrix.

◆ Actual Densities and Simulated densities surface plots are as following :

a) a = -0.5

Simulated for -0.5

Actual Density

b) a = 0

Simulated for 0

Actual Density

c) a = 0.5

Simulated density for 0.5
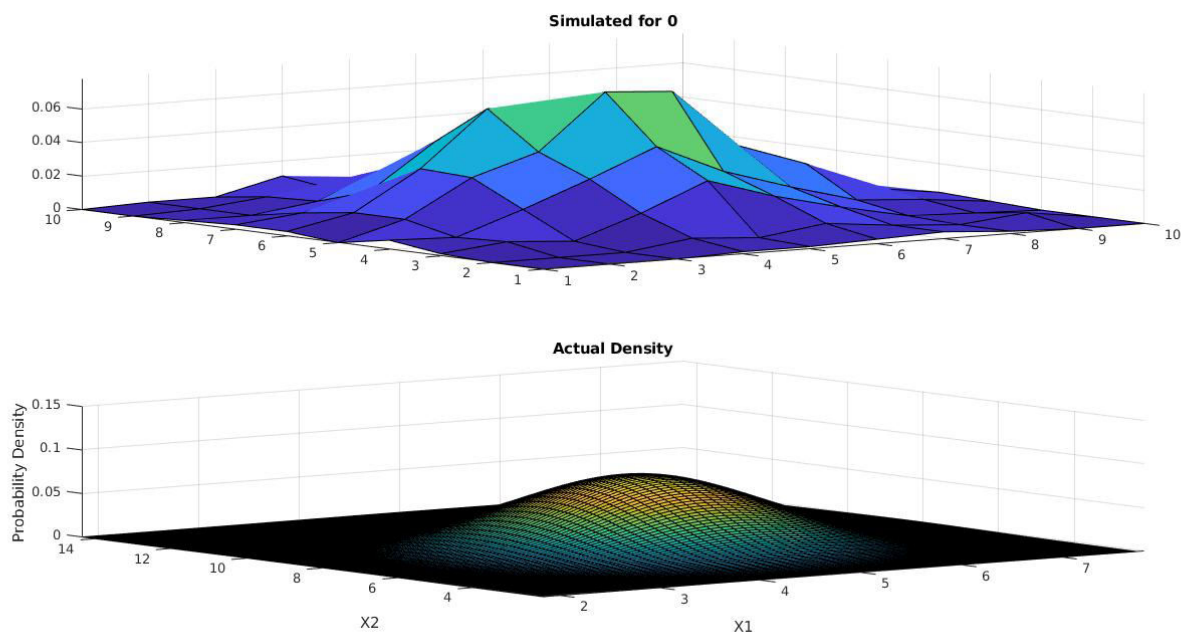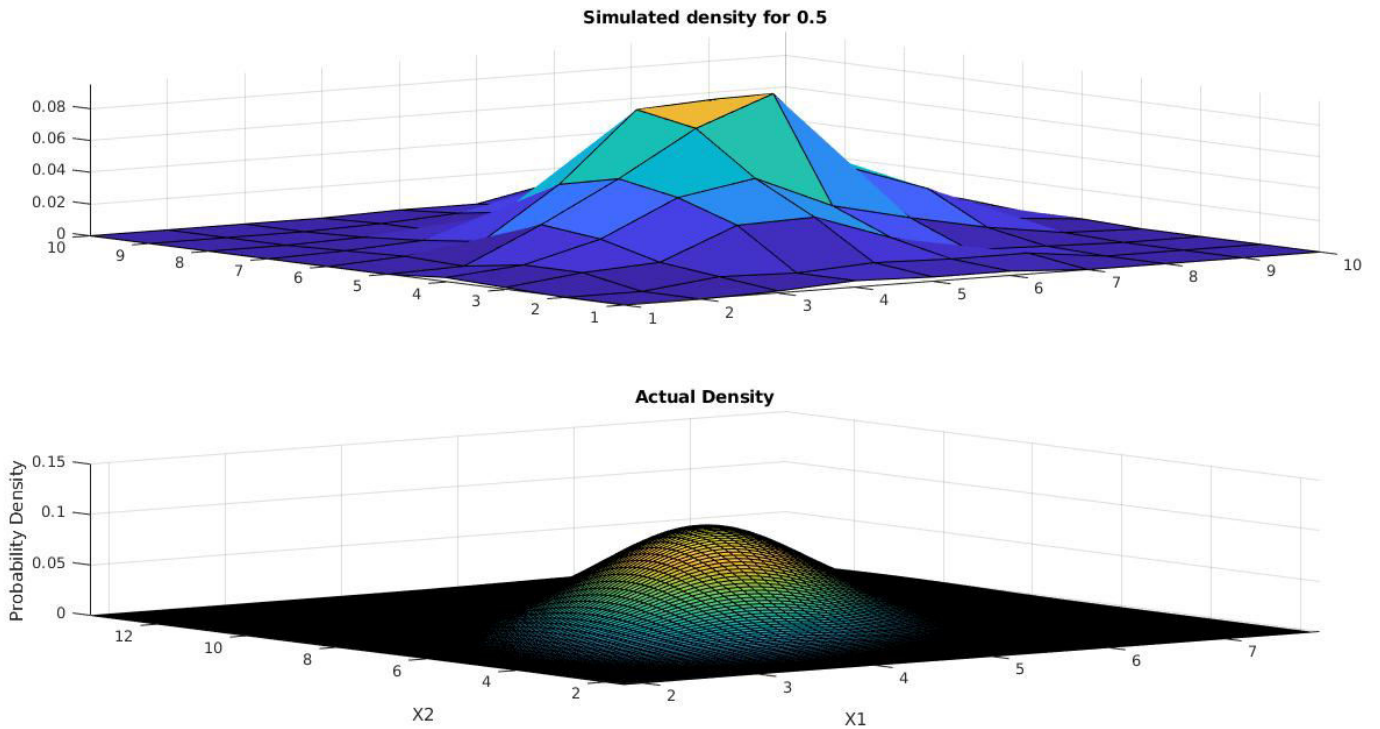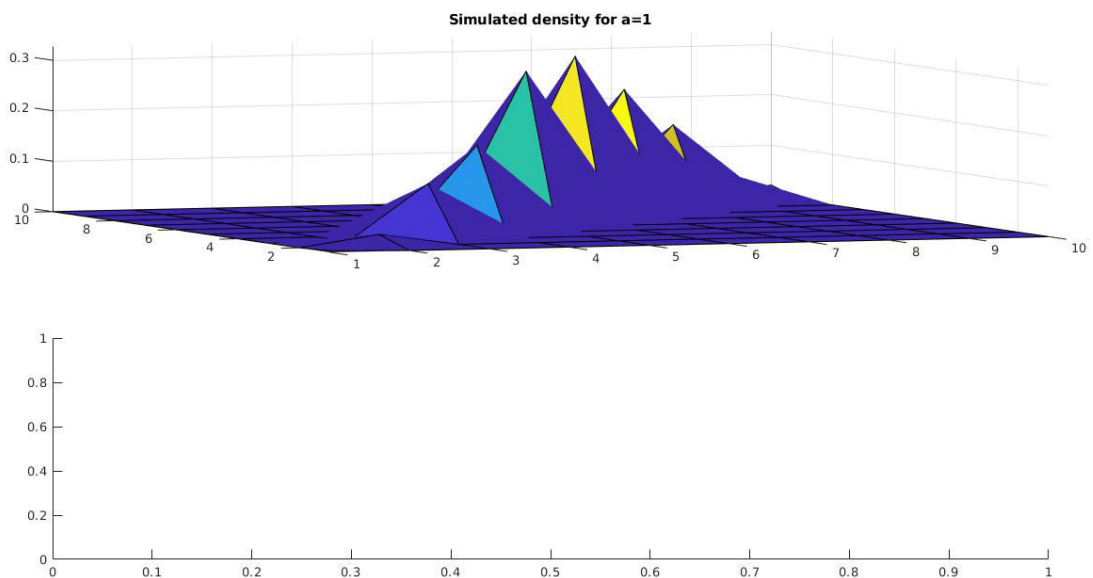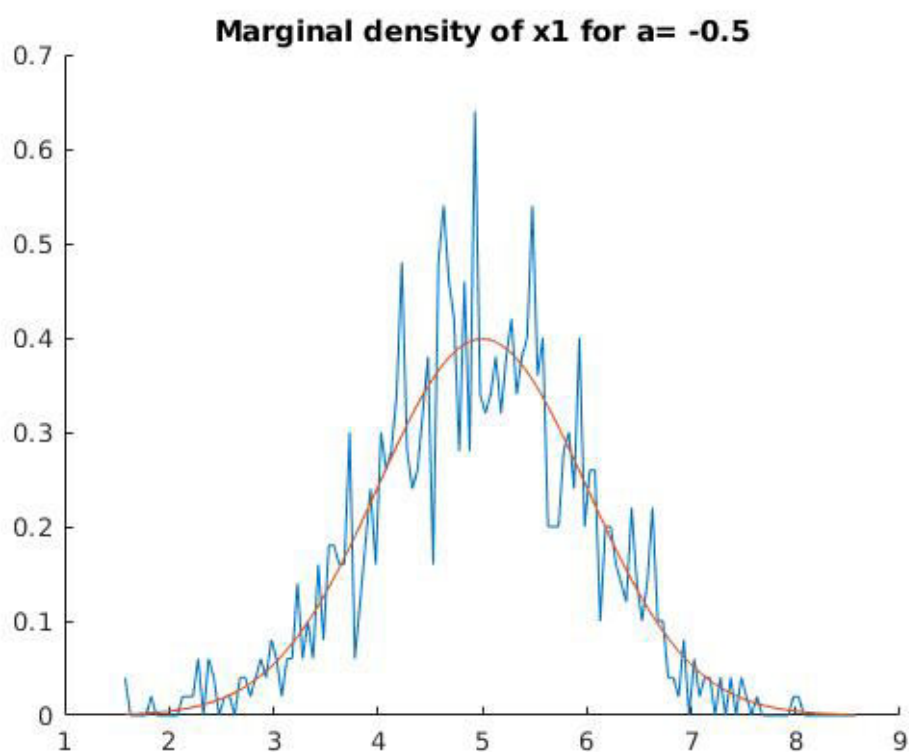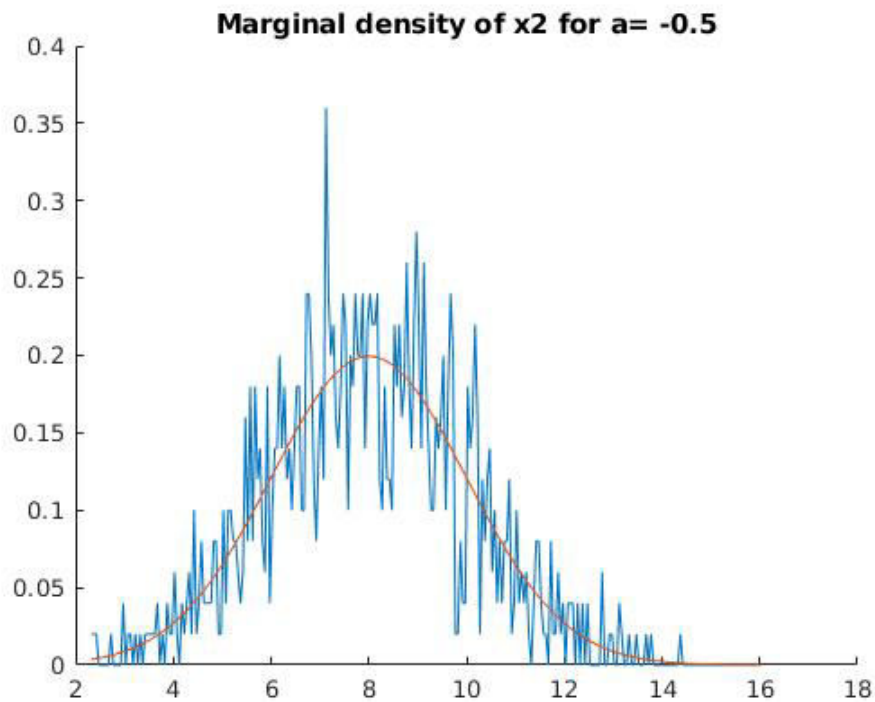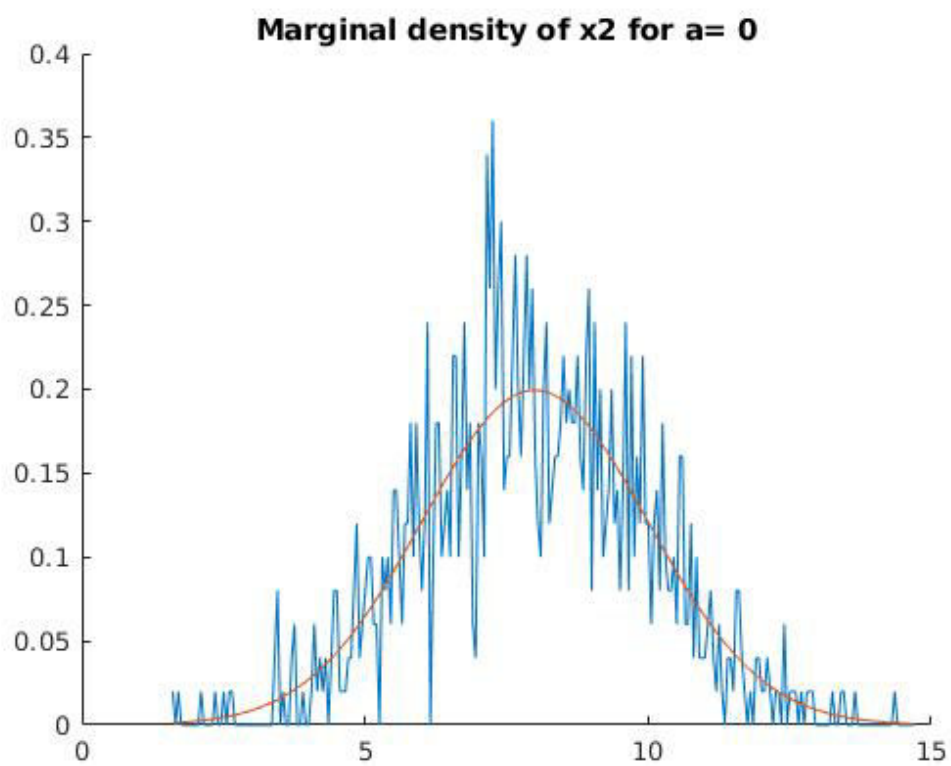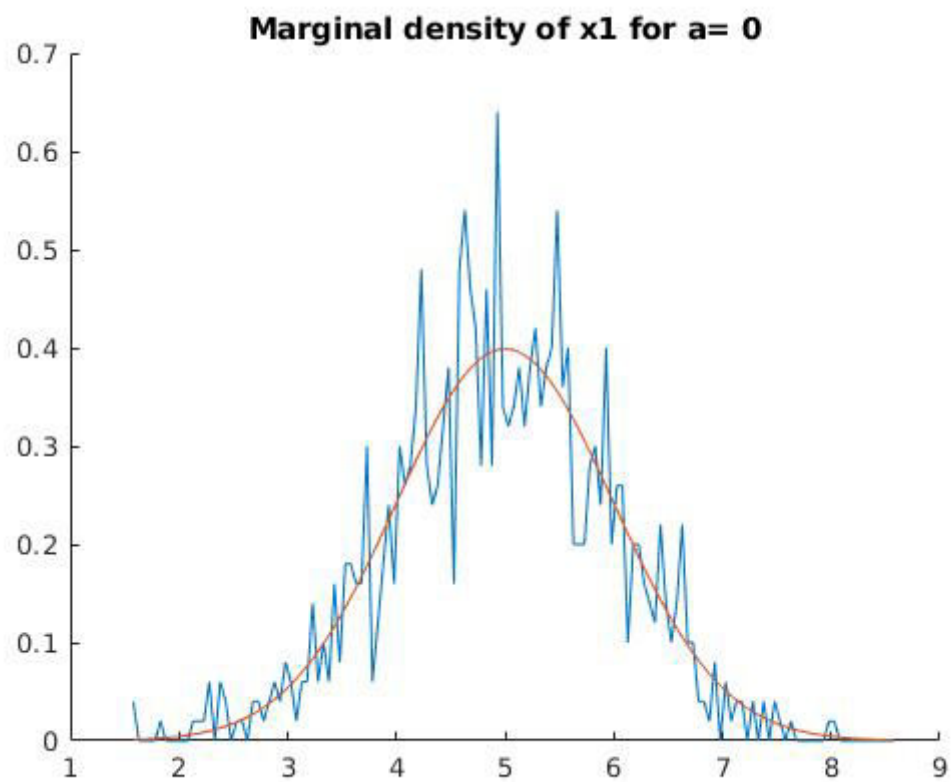

Actual Density

d) a = 1

Simulated density for a=1

Since for a=1,Sigma matrix is singular, it's determinant is zero and it does not qualify as a covariance matrix.

◆ Actual Marginal Densities and Simulated
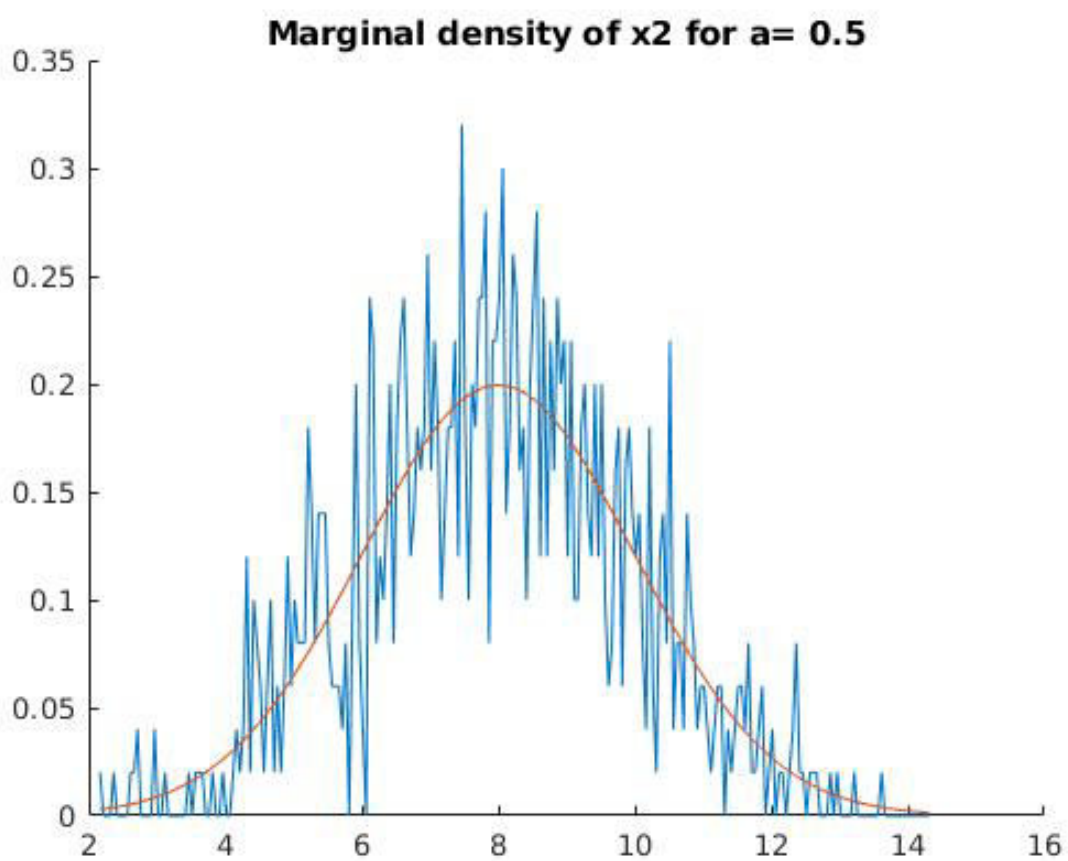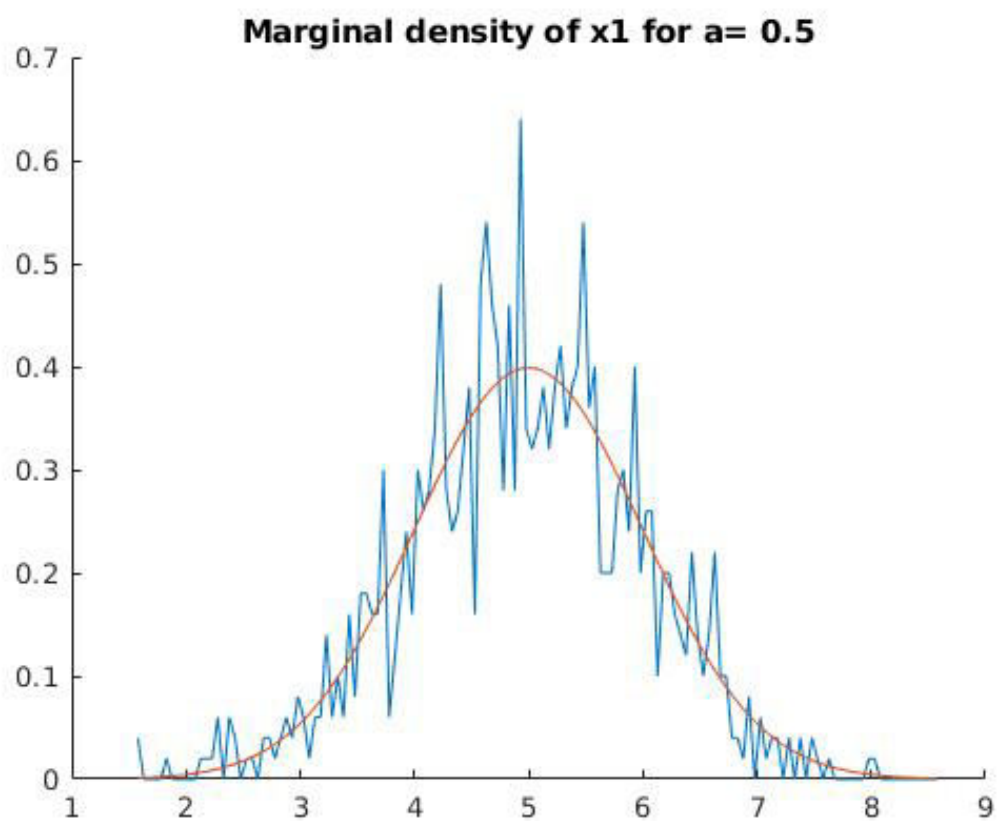 Marginal densities are plotted are as following :

a) a = -0.5

Marginal density of x2 for a= -0.5

Marginal density of x1 for a= -0.5

a) a = 0

Marginal density of x1 for a= 0

Marginal density of x2 for a= 0

a) a = 0.5

Marginal density of x1 for a= 0.5

Marginal density of x2 for a= 0.5

a) a = 1

Marginal density of x1 for a= 1

Marginal density of x2 for a= 1