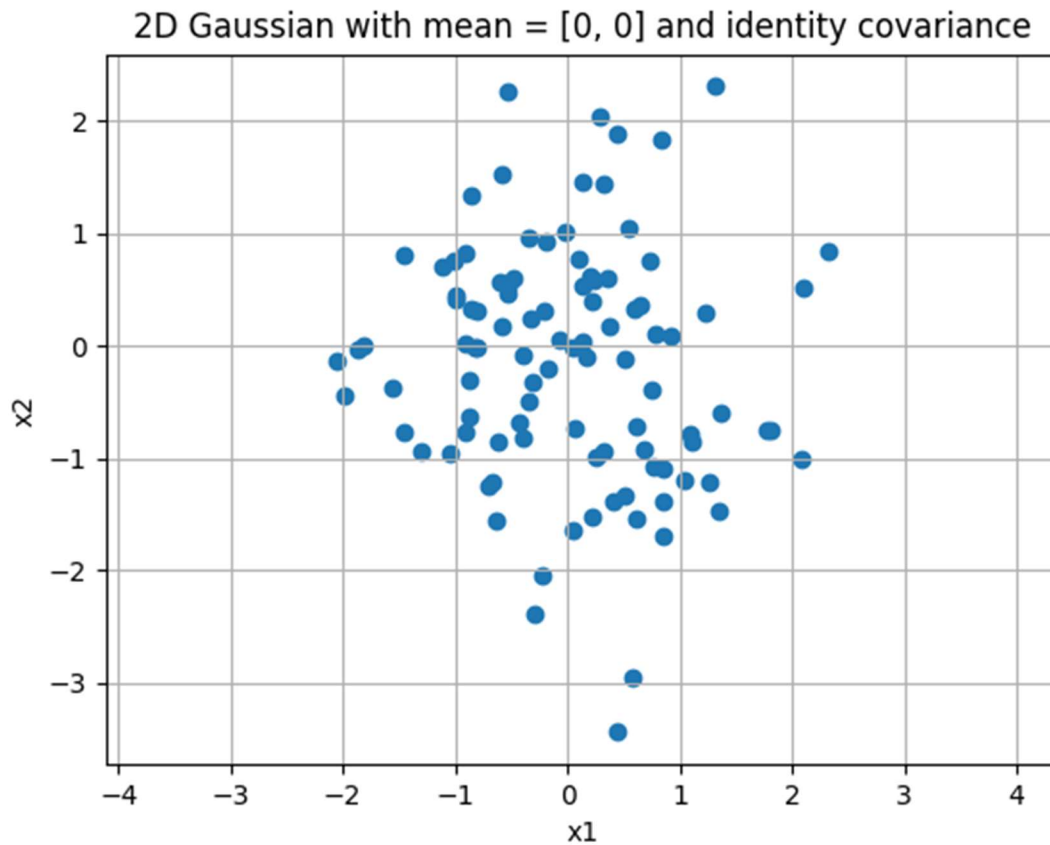
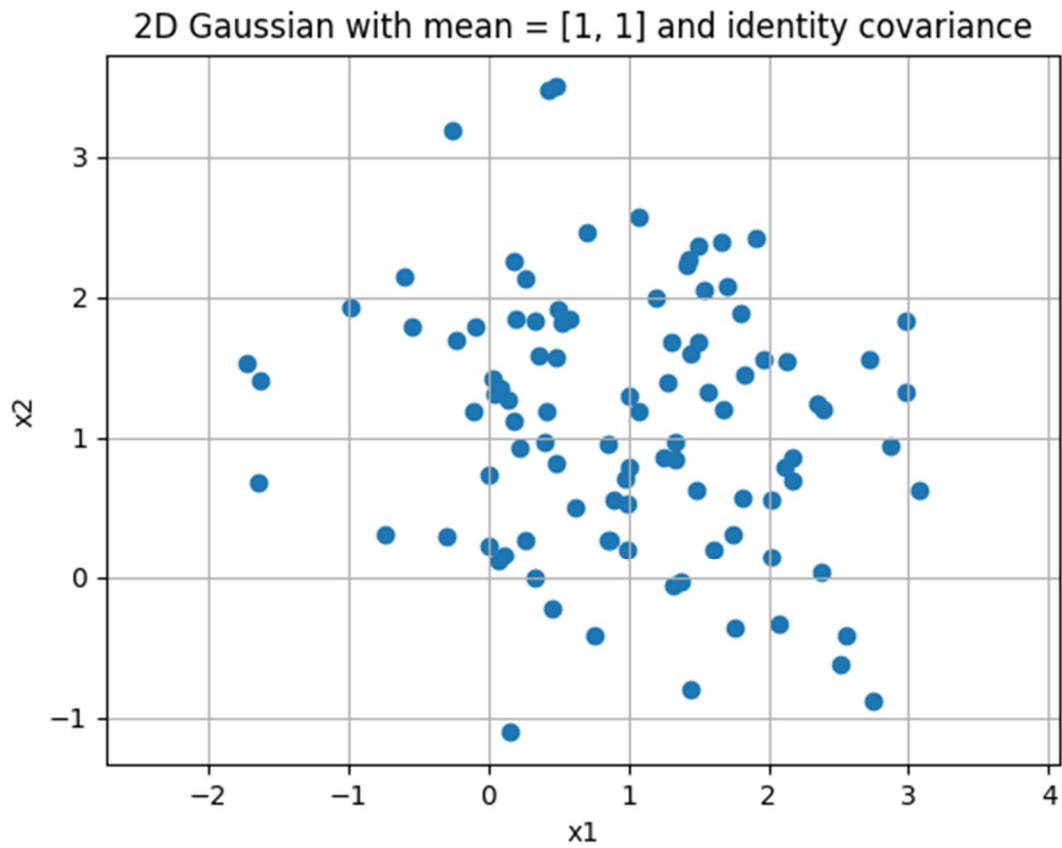


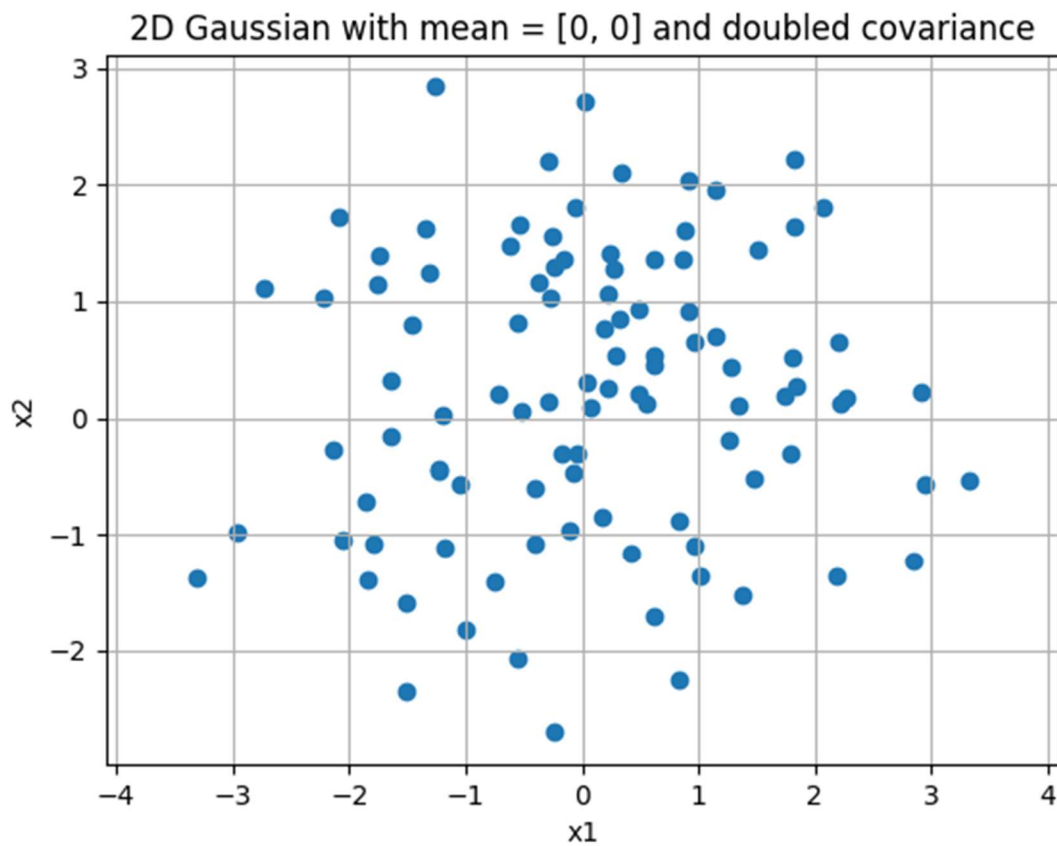
## Plots for Question 5-1:



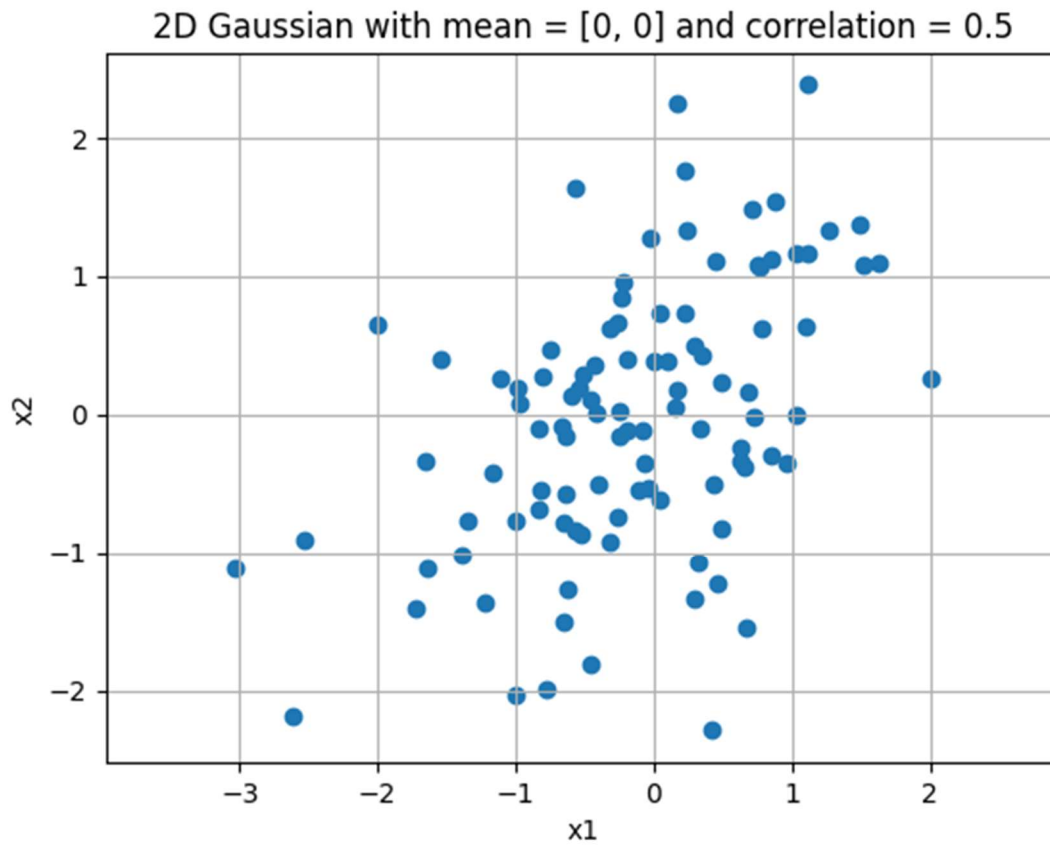
These points are distributed around the origin (the given mean), with most points falling within the range of  $\pm 2$  for both the  $x_1$  and  $x_2$  values. There are a few outliers that exceed those values.



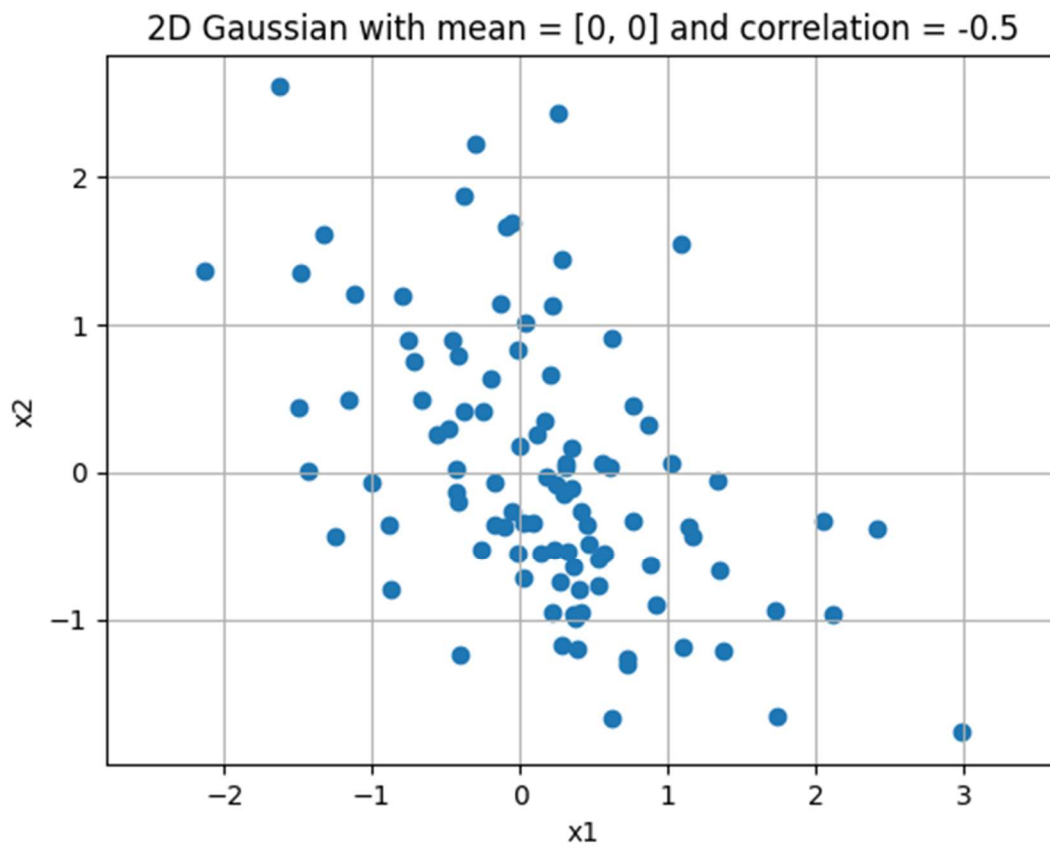
These points are distributed around the given mean [1, 1], with the range shifted so that most points fall within [-1, 3] for both the  $x_1$  and  $x_2$  values.



These points are dispersed evenly around the origin, but more widely than was seen with the identity covariance.



These points are still dispersed around the origin, but with a tendency toward the line  $y=x$  due to the correlation value.



These points are still dispersed around the origin, but with a tendency toward the line  $y = -x$  due to the correlation value.