Problem 1

Source code is present in P1_data file with name problem1.py

In code, given below: variations of covariance can be done.

```
"""----------------------change covarience----------------------"""
cov6=cov5



"""--------------calculating gaussian-----------------------------"""
```

Problem 2

Source code is present in P2_data file with name problem2.py

In the source code, given below: variations of covariance can be done.

```
"""----------------------change covarience----------------------"""

cov1=0.1*np.eye(2)
#cov1[0][0]=5;cov1[0][1]=4;cov1[1][0]=1.5;cov1[1][1]=2;
#cov0=np.eye(2)
#cov1[1][1]=10

cov0=cov1
#print(cov0)
#print(cov1)
"""cov1[0][0]=5;cov1[0][1]=4.5;cov1[1][0]=7;cov1[1][1]=8;
cov0[0][0]=1;cov0[0][1]=0.5;cov0[1][0]=3;cov0[1][1]=4;

cov0=np.transpose(cov0)
cov1=np.transpose(cov1)
print(cov0)
print(cov1)"""
"""--------------calculating gaussian-----------------------------"""
```

Probelm3

Source code is present in Problem3 file with name 1problem3.py

NOTE:-

I have used libraries of python like:-

Pandas:- to extract data.

Numpy:- to take multidimensional array and to calculate inverse, matrix multiplication and finding determinant.

Matplot:- to plot the data.