Pattern Recognition practical 2

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1 Covariance matrix

1.1

Using the code given in the appendix we get the following mean vector:

$$\begin{bmatrix} 5.8000 \\ 5.0000 \\ 6.2000 \end{bmatrix} \tag{1}$$

And the following covariance matrix is yielded:

$$\begin{bmatrix} 3.2000 & 0.2500 & -0.4500 \\ 0.2500 & 2.5000 & -3.7500 \\ -0.4500 & -3.7500 & 5.7000 \end{bmatrix} \tag{2}$$

Appendix

Code for assignment 1:

```
1  v1 = [4,5,6];
2  v2 = [6,3,9];
3  v3 = [8,7,3];
4  v4 = [7,4,8];
5  v5 = [4,6,5];
6
7  m1 = [v1;v2;v3;v4;v5];
8
9  mean1 = [mean(m1(:,1)); mean(m1(:,2)); mean(m1(:,3))];
10
11 cov1 = cov(m1);
12
13 mean1
14 cov1
```