Coursework Four Results by:

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The Mean vector of the HepatitisC data set:

```
1.164   3.916   0.448   5.679   4.865   3.778   4.127   3.604   0.217
```

The Covariance matrix of the HepatitisC data set:

```
 5.880   0.245 −0.004 −0.284 −0.346 −0.417 −0.481 −0.267 −0.067
 0.245   7.572   0.073 −0.358 −0.346   0.257   2.273   0.946 −0.032
−0.004   0.073   0.247 −0.116 −0.039 −0.003   0.100   0.066 −0.005
−0.284 −0.358 −0.116 16.960   7.969   4.443 −1.036 −0.306   0.047
−0.346 −0.346 −0.039   7.969   8.361   4.921 −0.763 −0.752 −0.001
−0.417   0.257 −0.003   4.443   4.921   6.683 −0.087 −0.376 −0.141
−0.481   2.273   0.100 −1.036 −0.763 −0.087 20.583   1.122   0.014
−0.267   0.946   0.066 −0.306 −0.752 −0.376   1.122   4.317   0.119
−0.067 −0.032 −0.005   0.047 −0.001 −0.141   0.014   0.119   0.170
```

The Eigenface images of the Priciple Components:

The magnitudes of 'c.pgm' from given basis:

```
1206.254 −1590.133 −248.136 −821.249 246.009 −771.900 963.633 376.967 161.5
```
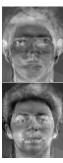
The Partial Reconstructions of image 'c.pgm':

The Eigenface images of the Priciple Components:

The magnitudes of 'c.pgm' from given basis:

```
828.928 -941.699 1887.013 -410.837 -1537.080 -1110.709
```

The Partial Reconstructions of image 'c.pgm':