

## Coursework Four Results by mlo08

Mean vector for HepatitisC.txt:

```
[ 1.1638756  3.91626794  0.44796651  5.67882775  4.86543062  3.77811005  
 4.12739234  3.60406699  0.21650718]
```

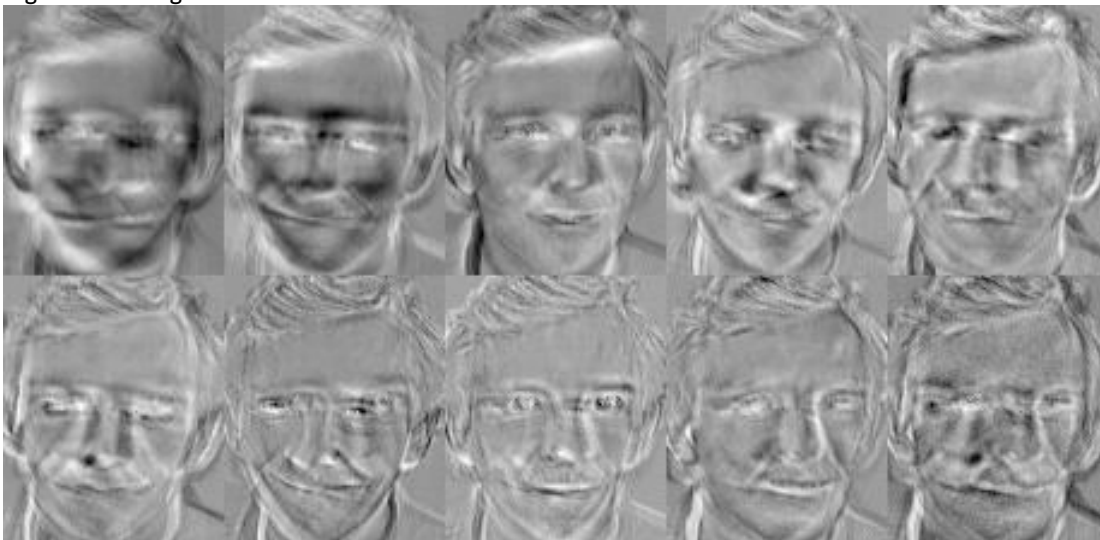
Covariance matrix for HepatitisC.txt:

```
[[ 5.87977145e+00  2.44729254e-01 -4.03520225e-03 -2.84260206e-01  
 -3.45977253e-01 -4.17236477e-01 -4.81092461e-01 -2.67213856e-01  
 -6.72190105e-02]  
 [ 2.44729254e-01  7.57168014e+00  7.34382472e-02 -3.57848064e-01  
 -3.45804735e-01  2.57292284e-01  2.27279170e+00  9.45882333e-01  
 -3.15314154e-02]  
 [ -4.03520225e-03  7.34382472e-02  2.47440506e-01 -1.15764204e-01  
 -3.90230616e-02 -3.47362408e-03  9.96906846e-02  6.61602799e-02  
 -5.48406679e-03]  
 [ -2.84260206e-01 -3.57848064e-01 -1.15764204e-01  1.69602217e+01  
  7.96872307e+00  4.44275589e+00 -1.03625991e+00 -3.06173566e-01  
  4.68368367e-02]  
 [ -3.45977253e-01 -3.45804735e-01 -3.90230616e-02  7.96872307e+00  
  8.36069533e+00  4.92105013e+00 -7.62619224e-01 -7.52294990e-01  
 -7.69530322e-04]  
 [ -4.17236477e-01  2.57292284e-01 -3.47362408e-03  4.44275589e+00  
  4.92105013e+00  6.68263245e+00 -8.72157033e-02 -3.75757719e-01  
 -1.41038802e-01]  
 [ -4.81092461e-01  2.27279170e+00  9.96906846e-02 -1.03625991e+00  
 -7.62619224e-01 -8.72157033e-02  2.05828040e+01  1.12168386e+00  
  1.36947764e-02]  
 [ -2.67213856e-01  9.45882333e-01  6.61602799e-02 -3.06173566e-01  
 -7.52294990e-01 -3.75757719e-01  1.12168386e+00  4.31711092e+00  
  1.19286506e-01]  
 [ -6.72190105e-02 -3.15314154e-02 -5.48406679e-03  4.68368367e-02  
 -7.69530322e-04 -1.41038802e-01  1.36947764e-02  1.19286506e-01  
  1.69733334e-01]]
```

Components magnitudes for c.pgm:

```
1206.254 -1590.133 -248.136 -821.249 246.009 -771.900 963.633 376.967 161.599 -533.276
```

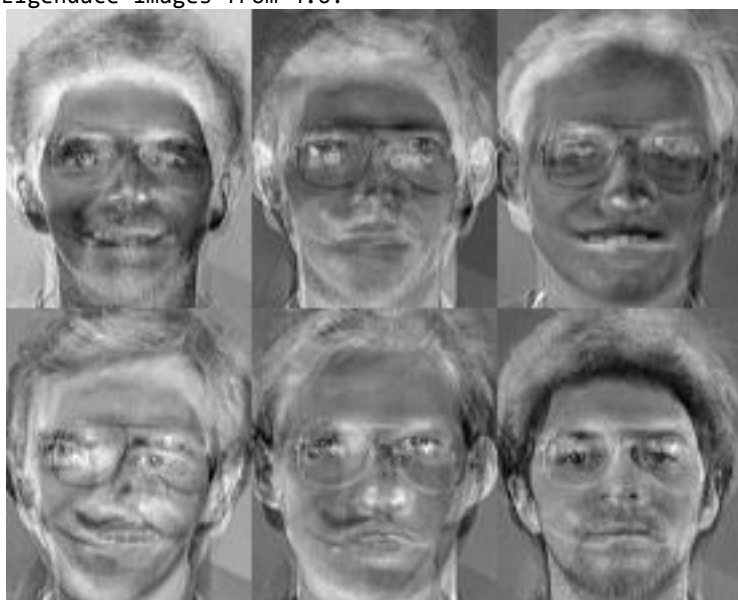
Eigenface images from 4.3:



Reconstructions of c.pgm from 4.5:



Eigendace images from 4.6:



Reconstructions of c.pgm from 4.6:

