EXPERIMENT-3

Aim: To find the Eigenvalues and eigenvectors in Scilab.

Operations:

```
--> A=[2,1,1;1,3,2;3,1,4]

 A  = 2.   1.   1.
      1.   3.   2.
      3.   1.   4.
--> disp("The eigenvalues of matrix A are:",spec(A));

  "The eigenvalues of matrix A are:"

   6.095824 + 0.i
   1.452088 + 0.4336988i
   1.452088 - 0.4336988i

--> [c,d]=spec(A)

 c  = 0.3243216 + 0.i   0.3899937 - 0.1875413i   0.3899937 + 0.1875413i
      0.5849985 + 0.i   0.5379993 + 0.2718959i   0.5379993 - 0.2718959i
      0.7433655 + 0.i  -0.6703451 + 0.i          -0.6703451 + 0.i

 d  = 6.095824 + 0.i   0.       + 0.i          0.       + 0.i
      0.       + 0.i   1.452088 + 0.4336988i   0.       + 0.i
      0.       + 0.i   0.       + 0.i          1.452088 - 0.4336988i

--> disp("The eigenvector corresponding to matrix A are:",c);

  "The eigenvector corresponding to matrix A are:"

   0.3243216 + 0.i   0.3899937 - 0.1875413i   0.3899937 + 0.1875413i
   0.5849985 + 0.i   0.5379993 + 0.2718959i   0.5379993 - 0.2718959i
   0.7433655 + 0.i  -0.6703451 + 0.i          -0.6703451 + 0.i
```