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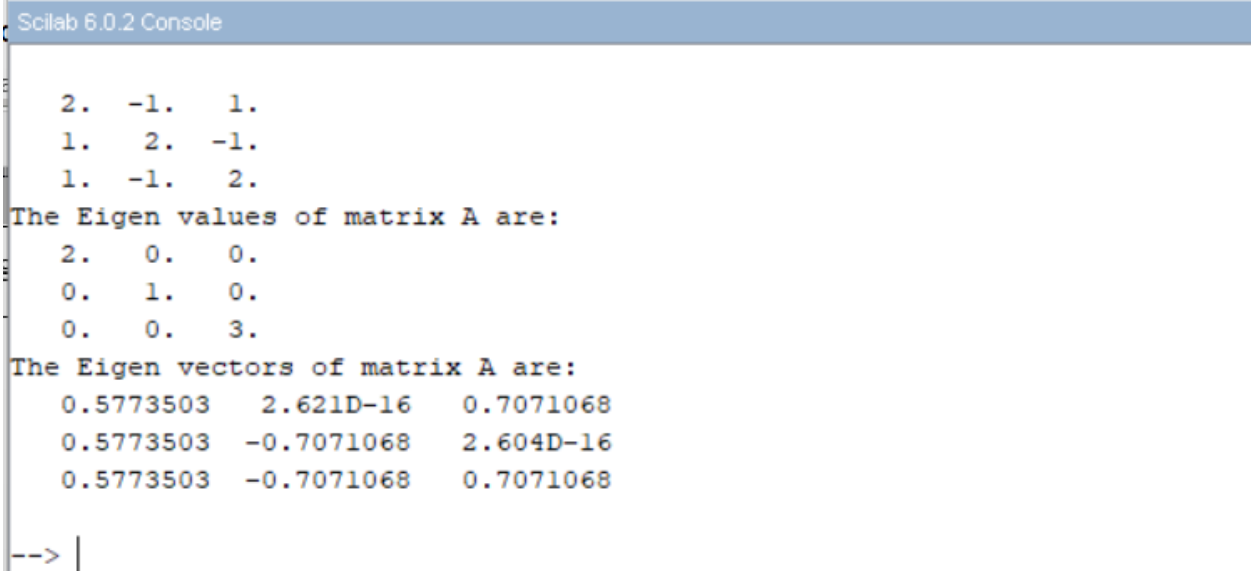
Experiment 9

AIM : Implementation of Eigen values and Eigen Vectors in Scilab.

Code 1

```
//Eigen values and vectors:
clc
A=[2 -1 1; 1 2 -1; 1 -1 2];
disp(A);
[c,d]=spec(A);
printf("The Eigen values of matrix A are:");
disp(d);
printf("The Eigen vectors of matrix A are:");
disp(c);
```

Output 1



```
Scilab 6.0.2 Console

2.  -1.  1.
1.   2. -1.
1.  -1.  2.
The Eigen values of matrix A are:
2.   0.   0.
0.   1.   0.
0.   0.   3.
The Eigen vectors of matrix A are:
0.5773503  2.621D-16  0.7071068
0.5773503 -0.7071068  2.604D-16
0.5773503 -0.7071068  0.7071068
--> |
```

Code 2	<pre>//Eigen values and vectors: clc A=[2 2 1; 1 3 -1;1 2 2]; disp(A); [c,d]=spec(A); printf("The Eigen values of matrix A are:"); disp(d); printf("The Eigen vectors of matrix A are:"); disp(c);</pre>
Output 2	<div>Scilab 6.0.2 Console</div> <pre> 2. 2. 1. 1. 3. -1. 1. 2. 2. The Eigen values of matrix A are: 1. 0. 0. 0. 3. + 2.895D-08i 0. 0. 0. 3. - 2.895D-08i The Eigen vectors of matrix A are: 0.8944272 -0.7071068 -0.7071068 -0.4472136 6.320D-16 - 1.023D-08i 6.320D-16 + 1.023D-08i 0. -0.7071068 -0.7071068 --> </pre>
CONCLUSION:	Hence, by completing this experiment I came to know about Implementation of Eigen values and vectors in Scilab.