```
% ECE 403 Assignment 1, Problem 1

A = [1 2 1; 2 3 1];

[U,S,V] = svd(A)

A1 = S(1,1)*U(:,1)*V(:,1)'

norm(A - A1, 'fro')
```

U =

```
   -0.5449    -0.8385
   -0.8385     0.5449
```

S =

```
    4.4552         0         0
         0    0.3888         0
```

V =

```
   -0.4987     0.6465     0.5774
   -0.8092    -0.1087    -0.5774
   -0.3105    -0.7551     0.5774
```

A1 =

```
    1.2107     1.9646     0.7538
    1.8630     3.0230     1.1600
```

ans =

```
    0.3888
```

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