```
%Abhay Nanduri
% CH.EN.U4AIE21130
```

```
%SVD
A = [3 2 2;2 3 -2]
```

```
A = 2×3
     3     2     2
     2     3    -2
```

```
[u,s,d] = svd(A)
```

```
u = 2×2
   -0.7071    0.7071
   -0.7071   -0.7071
s = 2×3
    5.0000         0         0
         0    3.0000         0
d = 3×3
   -0.7071    0.2357   -0.6667
   -0.7071   -0.2357    0.6667
   -0.0000    0.9428    0.3333
```

```
B=[4 3 ;0 -5]
```

```
B = 2×2
     4     3
     0    -5
```

```
[u1,s1,d1]=svd(B)
```

```
u1 = 2×2
   -0.7071   -0.7071
    0.7071   -0.7071
s1 = 2×2
    6.3246         0
         0    3.1623
d1 = 2×2
   -0.4472   -0.8944
   -0.8944    0.4472
```

```
%PCA
C = [4 8 13 7;11 4 5 14]'
```

```
C = 4×2
     4    11
     8     4
    13     5
     7    14
```

```
pca(C)
```

```
ans = 2×2
   -0.5574    0.8303
    0.8303    0.5574
```

```
D = [1 2 3;2 4 6;2 2 2]
```

```
D = 3×3
     1     2     3
     2     4     6
     2     2     2
```

```
pca(D)
```

```
ans = 3×2
    0.0849    0.9089
    0.4792    0.3220
    0.8736   -0.2650
```