

PROGRAM 2:

AIM: Perform SVD (Singular Value Decomposition) Using python.

PROGRAM:

```
from numpy import array
from scipy.linalg import svd
A1= array([[2,13,3],[5,9,10],[8,7,3],[26,18,30],[22,31,45]])
print (A1)
a,b,c=svd(A1)
print (a)
print (b)
print (c)
```

OUTPUT:

```
C:\Users\ajcemca\AppData\Local\Programs\Python\Python39\python.exe C:/Users/ajcemca/PycharmProjects/pythonProject/pythonProject1/svd2.py
[[ 2 13  3]
 [ 5  9 10]
 [ 8  7  3]
 [26 18 30]
 [22 31 45]]
[[-0.12978816 -0.70009789  0.51828503 -0.21881071 -0.4201434 ]
 [-0.18827986 -0.19623861  0.00760666  0.95667704 -0.10369324]
 [-0.12501038  0.02998764  0.64353448  0.05797407  0.75231345]
 [-0.5697289   0.61976193  0.34606723 -0.03250256 -0.41289852]
 [-0.7794146  -0.2938524  -0.44432376 -0.18020408  0.27616395]]
[75.2800142  11.50945923  8.96949329]
[[-0.45378752 -0.51373277 -0.7281178 ]
 [ 0.65229561 -0.748186   0.12135957]
 [ 0.60711393  0.41987658 -0.6746231 ]]
```

Process finished with exit code 0