```
>> HQr
Enter the size of the matrix
6
Enter the size of the matrix
4
QR decomposition
Matrix H is
   -0.0614    0.1176   -0.3858   -0.0471
   -0.8697   -0.8847    0.2127    0.3709
   -0.5387   -0.1576    0.7445   -0.7098
    0.1905   -0.5672   -0.2818    0.9820
   -0.4356   -0.4296    0.0050    0.5948
    0.0374    0.7157    0.8721   -0.7612

Matrix Q is
     1

Matrix R is
    1.1304    0.8430   -0.5180   -0.0335
         0    1.0627    0.8165   -1.4595
         0         0    0.8082   -0.2408
         0         0         0    0.5932

Matlab Generated Q R is
   -0.0544    0.1538    0.6676   -0.0251
   -0.7694   -0.2222    0.0055   -0.0329
   -0.4765    0.2298   -0.3836    0.5025
    0.1685   -0.6675   -0.4336   -0.1987
   -0.3854   -0.0986    0.1413   -0.6812
    0.0330    0.6473   -0.4463   -0.4923

    1.1304    0.8430   -0.5180   -0.0335
         0    1.0627    0.8165   -1.4595
         0         0   -0.8082    0.2408
         0         0         0   -0.5932

Single Valued Decomposition
Matrix U is
   -0.0309   -0.1366   -0.5611    0.3721
   -0.3515    0.7056   -0.1236    0.0760
    0.3246    0.6142   -0.0863   -0.4352
   -0.5296   -0.1006    0.5821   -0.2683
   -0.3335    0.2783    0.1733    0.6507
    0.6152    0.1365    0.5418    0.4134

Matrix Delta is
    2.1153         0         0         0
         0    1.5287         0         0
         0         0    0.5858         0
         0         0         0    0.3040
```

```
Matrix V is
    0.0946   -0.7009    0.4168   -0.5711
    0.5390   -0.4592    0.0685    0.7028
    0.4079    0.5291    0.7430   -0.0395
   -0.7309   -0.1341    0.5191    0.4223

Minimum X for QR is
    0.4989
    0.9699
    0.8638
   -1.0118

Minimum X for SVD is
   -0.3150
   -0.1568
   -0.3395
   -0.3018

Frobenius Norm for QR decomposition is   2.4893e-32

Frobenius Norm for SVD is    1.8118

Equinorm of QR decomposition is
    3.8691

Equinorm of SVD decomposition is
    0.7866

>> clear
>> HQr
Enter the size of the matrix
60
Enter the size of the matrix
45
Frobenius Norm for QR decomposition is   4.4734e-29

Frobenius Norm for SVD is  224.2898

Equinorm of QR decomposition is
    7.9053

Equinorm of SVD decomposition is
    4.2226

>>
```