```
%matrix A
A = [1 2 3 ; 4 5 6 ; 7 8 7 ; 4 2 3 ; 4 2 2];

%calling function house
[V,R] = house(A)

%calling function house2q
Q = house2q(V)

%function qr from matlab
[q ,r] = qr(A)

fprintf('The Q and R, produced by the code satisy A = QR \n');
```

```
V =

    0.7420         0         0
    0.2723    0.7866         0
    0.4765    0.1192   -0.9800
    0.2723   -0.4284    0.1842
    0.2723   -0.4284   -0.0748


R =

   -9.8995   -9.4954   -9.6975
         0   -3.2919   -3.0129
         0         0    1.9701
         0         0         0
         0         0    0.0000


Q =

   -0.1010   -0.3162    0.5420   -0.6842   -0.3577
   -0.4041   -0.3534    0.5162    0.3280    0.5812
   -0.7071   -0.3906   -0.5248    0.0094   -0.2683
   -0.4041    0.5580    0.3871    0.3656   -0.4918
   -0.4041    0.5580   -0.1204   -0.5390    0.4695


q =

   -0.1010   -0.3162    0.5420   -0.6842   -0.3577
   -0.4041   -0.3534    0.5162    0.3280    0.5812
   -0.7071   -0.3906   -0.5248    0.0094   -0.2683
   -0.4041    0.5580    0.3871    0.3656   -0.4918
   -0.4041    0.5580   -0.1204   -0.5390    0.4695


r =

   -9.8995   -9.4954   -9.6975
         0   -3.2919   -3.0129
         0         0    1.9701
         0         0         0
         0         0         0
```

```
The Q and R, produced by the code satisy A = QR
```

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