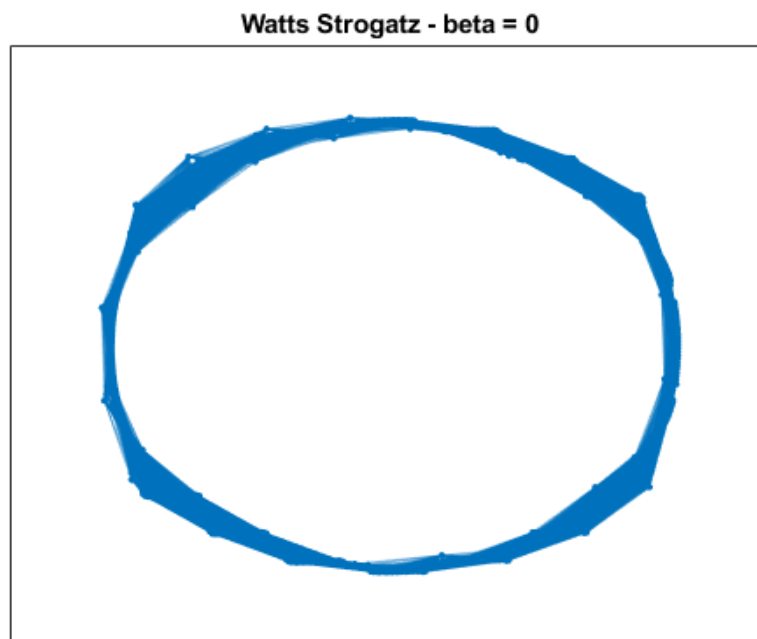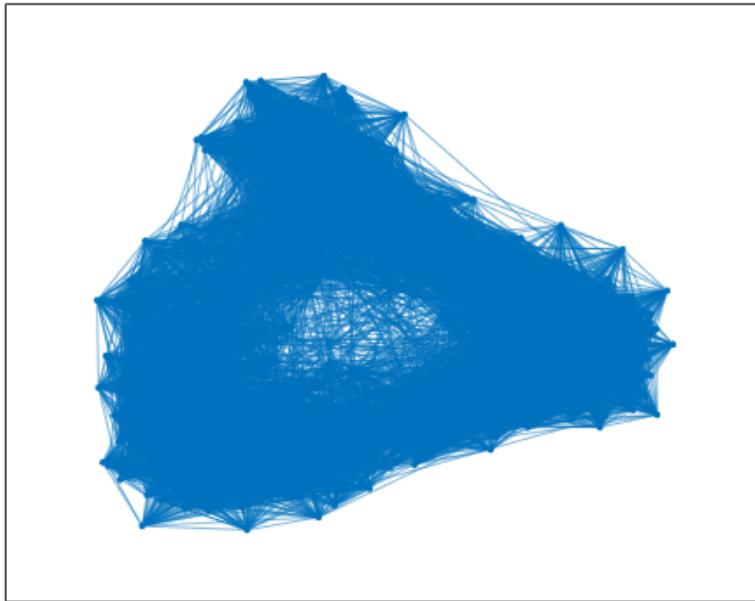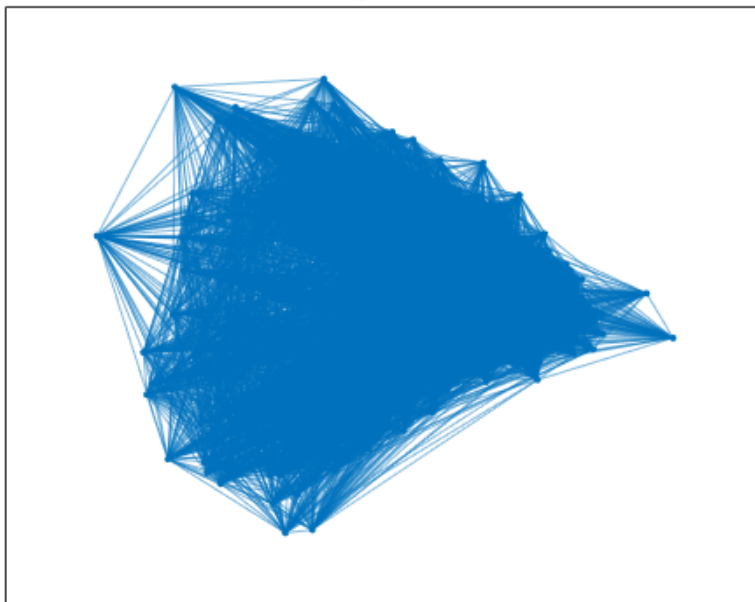```
clc; clear; close all;
```

```
N = 600;
K = 30;
beta = [0, 0.05, 0.5];

for i = 1:length(beta)
    figure(i);
    G = WattsStrogatz(N,K,beta(i));
    p = plot(G);
    title(['Watts Strogatz - beta = ', num2str(beta(i))]);
    deg(i,:) = degree(G);
end
```

Watts Strogatz - beta = 0

Watts Strogatz - beta = 0.05

Watts Strogatz - beta = 0.5


```
meanDeg = mean(deg, 2)
```

```
meanDeg = 3×1

    60
    60
    60
```
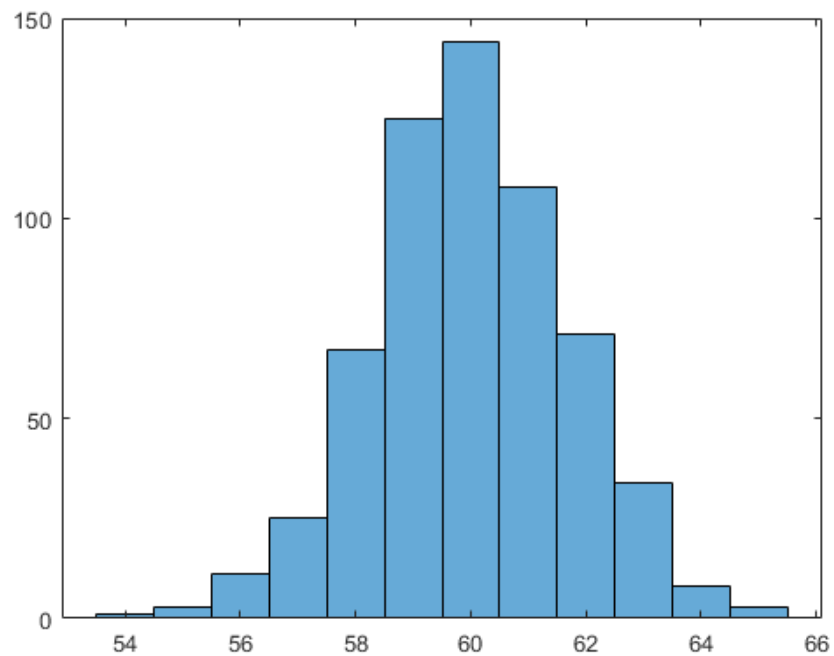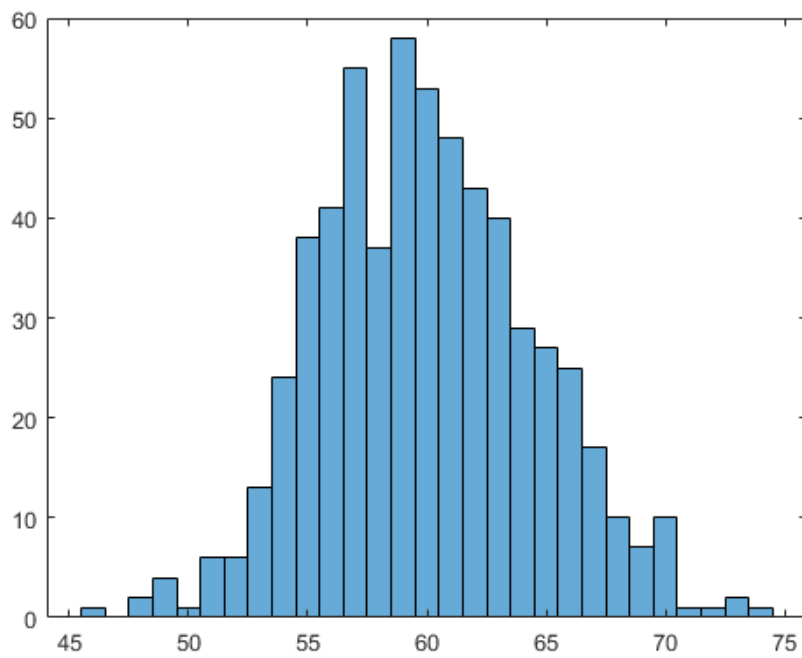
```
%degree distribution for beta = 0
histogram(deg(1,:));
```
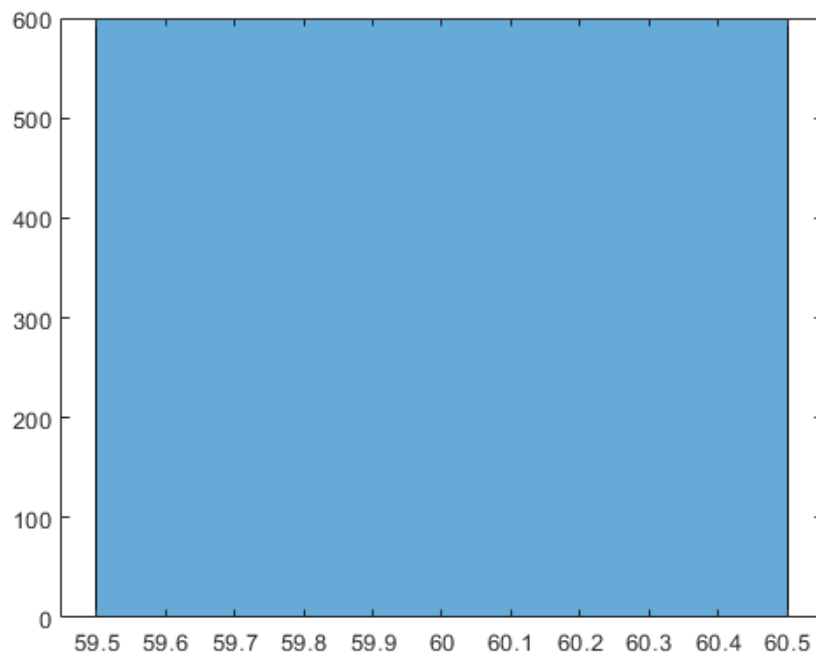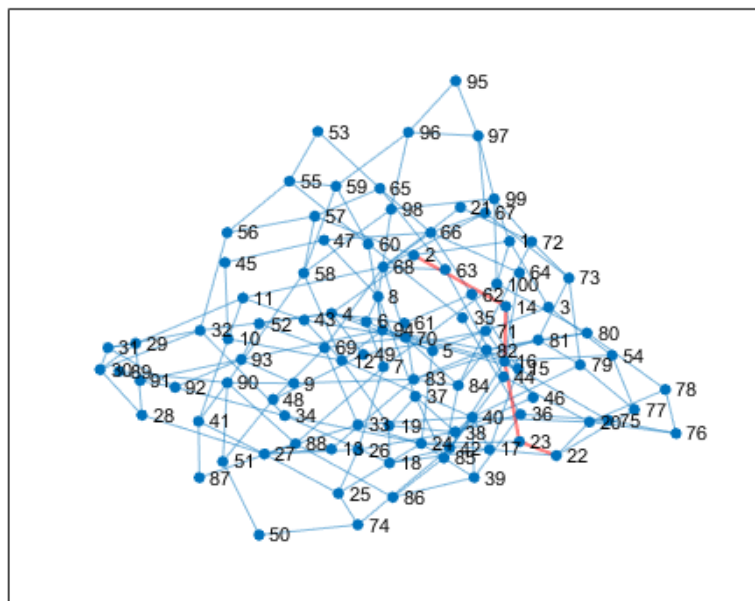
```
%degree distribution for beta = 0.05
histogram(deg(2,:));
```



```
%degree distribution for beta = 0.5
histogram(deg(3,:));
```

```
%Myopic Search
A = load('data.mat');
myopic(22, 2, A.A);
```
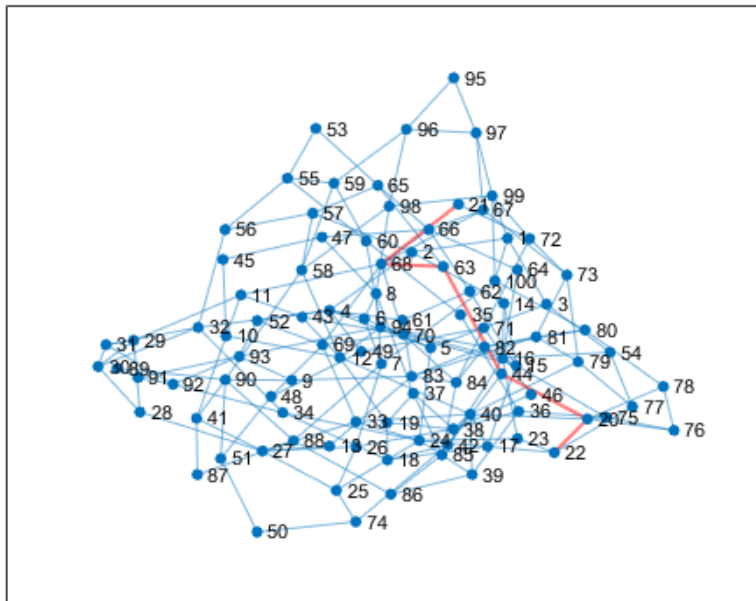


```
The path is given by
     22    23    16    14     2

The length of the path is 4.
```

```
myopic(22, 21, A.A);
```
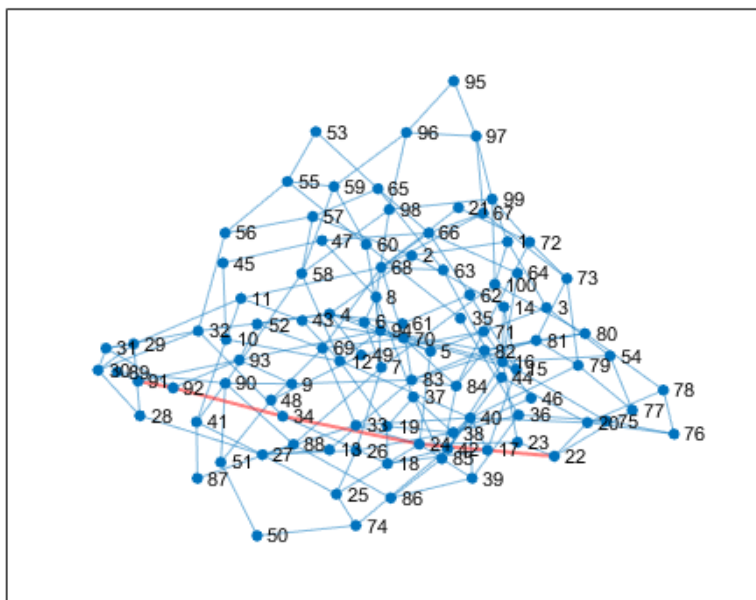
The path is given by

    22   20   44   63   68   21

The length of the path is 5.

```
myopic(22, 91, A.A);
```


The path is given by

    22   24   34   92   91

The length of the path is 4.

```
%compare myopic with shortestpath
Gd = graph(A.A);
pathGd = shortestpath(Gd, 22, 2)
```

```
pathGd = 1×5
    22    23    16    14     2
```

```
lengthPathGd = length(pathGd) - 1
```

```
lengthPathGd = 4
```

%compare myopic with shortestpath
Gd = graph(A.A);
pathGd = shortestpath(Gd, 22, 2)