

In [4]:

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#Pro: Joseph Garcia
# Assignment# 4
# mac 281

import networkx as nx

import matplotlib.pyplot as plt

%matplotlib inline

*** Starting to create a new graph

H = nx.Graph()

h = nx.generators.small.krackhardt_kite_graph()

print("Here are all Nodes of my krackhardt_kite_graph: ", "\n", h.nodes(), "\n")
print(" Here are the Edges of my krackhardt_kite_graph: ", "\n", h.edges())

*** adding all persons nemes for creating nodes.

person = {2:"md" ,5:"Helal", 7:"uddin", 8:"fariha", 9:"sultana", 6:"Joseph", 4:"
Garcia", 1:"Trump", 3:"Hillary", 0:"Obama"}
person

***Start to create new graph object

H1 =nx.Graph()

*****Start to create the Edges from the graph
# *** First step ****

a1 = [(0,1), (0,2), (0,3), (0,5), (1,3), (1,4), (1,6), (2,3), (2,5),
      (3,4), (3,5), (3,6), (4,6), (5,6), (5,7), (6,7), (7,8), (8,9)]

**** Secound step ****

a1 = h.edges()

**** Now connecting all the edges with graph object

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H1.add_edges_from(a1)

print("Show all the edges of named network", "\n" ,H1.edges())

F = md.relabel_nodes(H1, person)
print("-----\n")
print(" Show all the nodes of named network: ", "\n", F.nodes())
print("-----\n")
print(" show all the edges of named network: ", "\n", F.edges())

*** here using draw keyword to draw the graph

md.draw(F, with_labels =1)

*** here using show keyword to display my graph

plt.show()

```

Here are all Nodes of my krackhardt\_kite\_graph:

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[0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
```

Here are the Edges of my krackhardt\_kite\_graph:

```
[(0, 1), (0, 2), (0, 3), (0, 5), (1, 3), (1, 4), (1, 6), (2, 3), (2, 5), (3, 4), (3, 5), (3, 6), (4, 6), (5, 6), (5, 7), (6, 7), (7, 8), (8, 9)]
```

Show all the edges of named network

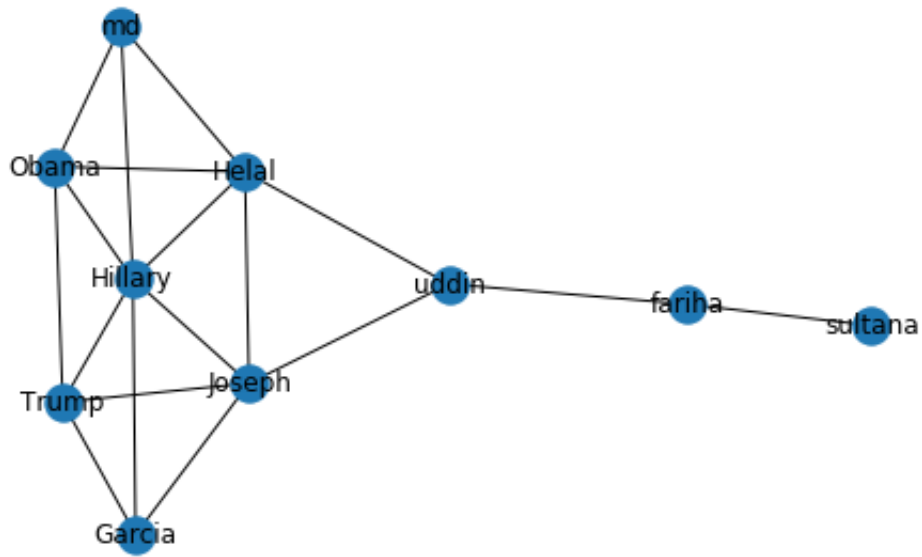
```
[(0, 1), (0, 2), (0, 3), (0, 5), (1, 3), (1, 4), (1, 6), (2, 3), (2, 5), (3, 4), (3, 5), (3, 6), (5, 6), (5, 7), (4, 6), (6, 7), (7, 8), (8, 9)]
```

Show all the nodes of named network:

```
['Obama', 'Trump', 'md', 'Hillary', 'Helal', 'Garcia', 'Joseph', 'uddin', 'fariha', 'sultana']
```

show all the edges of named network:

```
[('Obama', 'Trump'), ('Obama', 'md'), ('Obama', 'Hillary'), ('Obama', 'Helal'), ('Trump', 'Hillary'), ('Trump', 'Garcia'), ('Trump', 'Joseph'), ('md', 'Hillary'), ('md', 'Helal'), ('Hillary', 'Garcia'), ('Hillary', 'Helal'), ('Hillary', 'Joseph'), ('Helal', 'Joseph'), ('Helal', 'uddin'), ('Garcia', 'Joseph'), ('Joseph', 'uddin'), ('uddin', 'fariha'), ('fariha', 'sultana')]
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In [ ]: