Maximum Clique

July 9, 2020

```python
In [ ]: import networkx as nx
        import pygraphviz as pgv
        from nxpd import draw, nxpdParams
        nxpdParams['show'] = 'ipynb'


        G = nx.Graph()
        G.add_edges_from([('a', 'b'), ('b', 'c'), ('c', 'd'), ('d', 'e'), ('e', 'a'),
                          ('f', 'a'), ('g', 'b'), ('h', 'c'), ('i', 'd'), ('j', 'e'),
                          ('f', 'h'), ('h', 'j'), ('j', 'g'), ('g', 'i'), ('i', 'f'),
                          ('j', 'i'), ('j', 'd'), ('d', 'g')])

        draw(G, layout='circo')

In [ ]: cliques=nx.find_cliques(G)
        max_clique = G.nodes()[0]
        for c in cliques:
            if (len(c) > len(max_clique)):
                max_clique = c

        for v in max_clique:
            G.node[v]['color'] = 'red'
            for u in max_clique:
                if u != v:
                    G[u][v]['color']='red'

        draw(G, layout='circo')
```