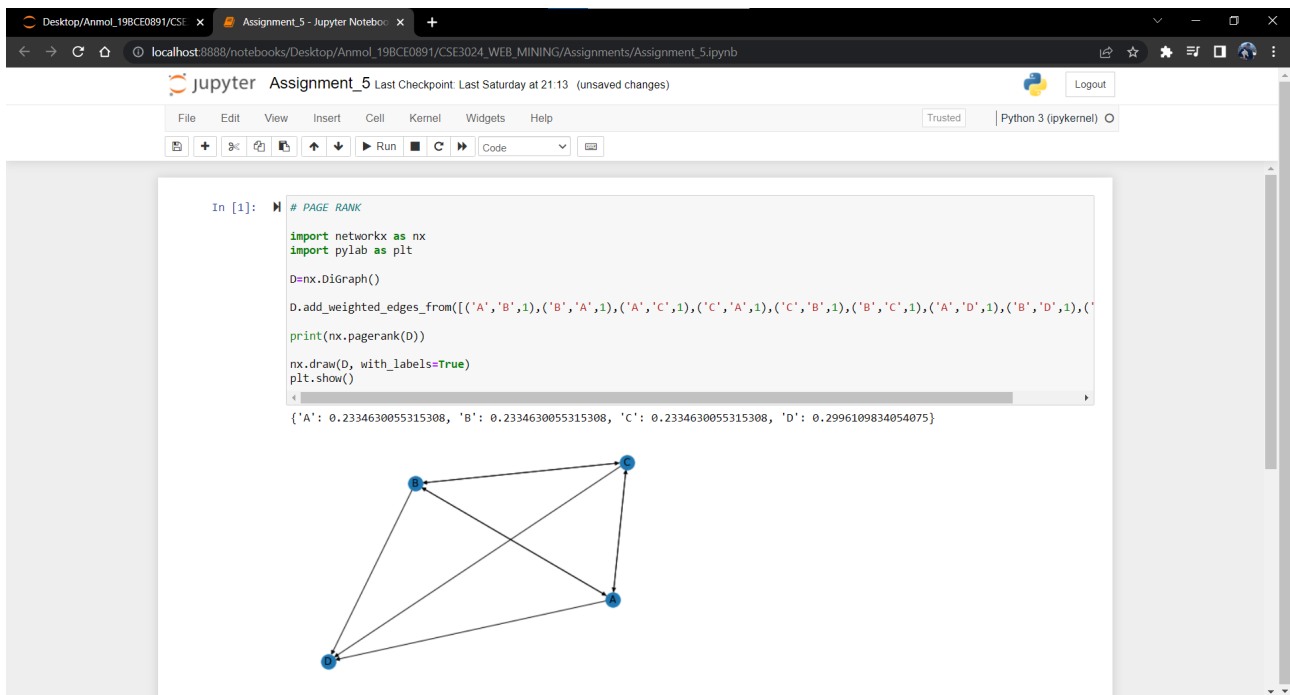


CSE3024 - WEB MINING (L41 + L42)

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DIGITAL ASSIGNMENT – 5

1. PAGE RANK



CODE -

PAGE RANK

```
import networkx as nx
import pylab as plt
```

```
D=nx.DiGraph()
```

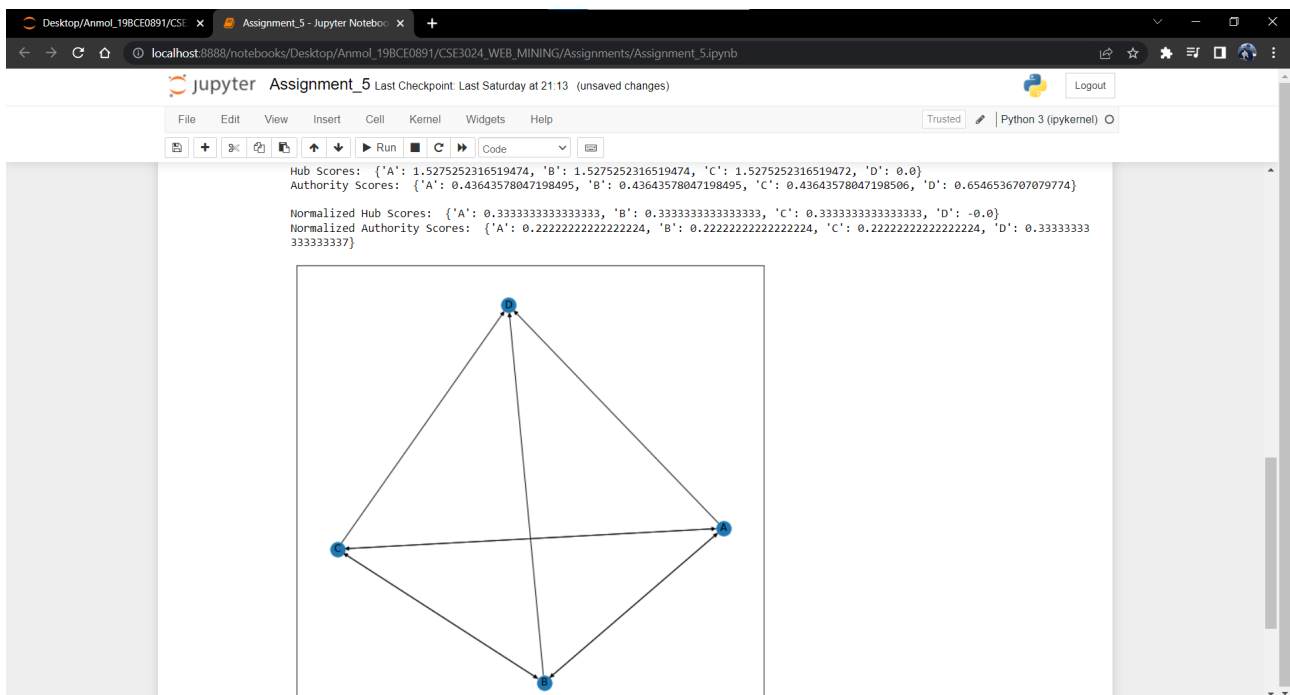
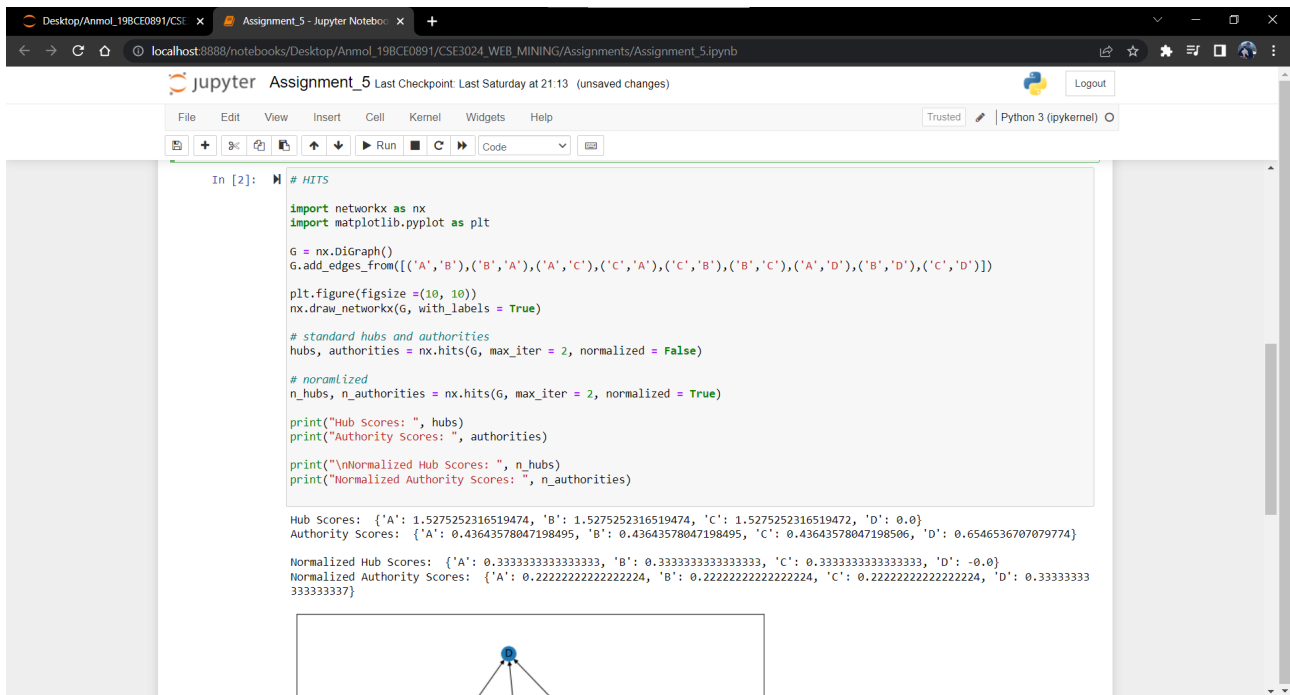
```
D.add_weighted_edges_from([('A','B',1),('B','A',1),('A','C',1),('C','A',1),('C','B',1),('B','C',1),('A','D',1),('B','D',1),('C','D',1)])
```

```
print(nx.pagerank(D))
```

```
nx.draw(D, with_labels=True)
plt.show()
```

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2. HITS



CODE -

HITS

```
import networkx as nx
import matplotlib.pyplot as plt
```

```
G = nx.DiGraph()
G.add_edges_from([('A','B'),('B','A'),('A','C'),('C','A'),('C','B'),('B','C'),('A','D'),('B','D'),('C','D')])
```

```
plt.figure(figsize=(10, 10))
nx.draw_networkx(G, with_labels = True)
```

```
# standard hubs and authorities
hubs, authorities = nx.hits(G, max_iter = 2, normalized = False)
```

```
# normalized
n_hubs, n_authorities = nx.hits(G, max_iter = 2, normalized = True)
```

```
print("Hub Scores: ", hubs)
print("Authority Scores: ", authorities)
```

```
print("\nNormalized Hub Scores: ", n_hubs)
print("Normalized Authority Scores: ", n_authorities)
```