Practical No. 05

AIM - Write a Program to parse XML text, generate Web Graph.

Source Code -

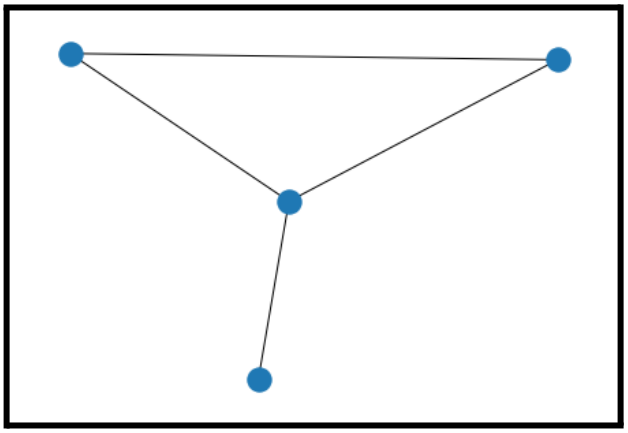
```
import networkx as nx
import matplotlib.pyplot as plt
from xml.dom.minidom import parse

# Open XML document using minidom parser
DOM_Tree = parse("movies.xml")
collection = DOM_Tree.documentElement
if collection.hasAttribute("shelf") :
    print ("Root Element => %s" % collection.getAttribute("shelf"))

# get all the movies in the collection
movies = collection.getElementsByTagName("movie")

#print details of each movie.
for movie in movies:
    print("\n----- Movie -----")
    if movie.hasAttribute("title"):
        print("Title: %s" %movie.getAttribute("title"))
        type = movie.getElementsByTagName('type')[0]
        print("Type: %s" % type.childNodes[0].data)
        format= movie.getElementsByTagName('format')[0]
        print("format: %s" % format.childNodes[0].data)
        rating= movie.getElementsByTagName('rating')[0]
        print("Rating: %s" % rating.childNodes[0].data)
        description=movie.getElementsByTagName('description')[0]
        print("description: %s" % description.childNodes[0].data)


def GenerateGraph():
     G=nx.Graph()
     # adding just one node:
     G.add_node("a")
     # adding a list of edges:
     G.add_edges_from([("a","b"),("b","c"), ("c","d"), ("d","a"),("a","c")])
     nx.draw(G)
```

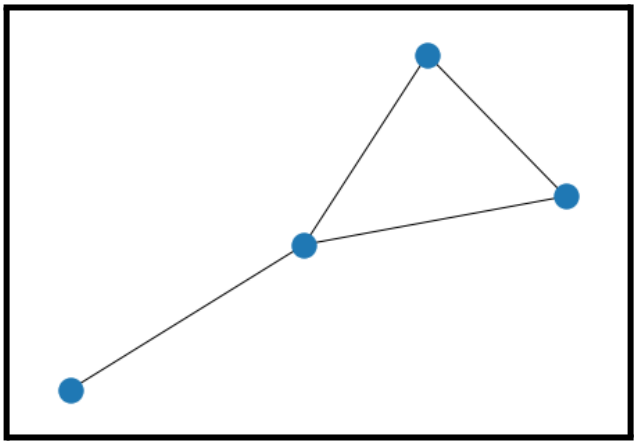
```
    plt.savefig("simple_path.png") # save as png
    plt.show() # display
    print("Nodes of Graph - ")
    print(G.nodes())
    print("Edges of Graph - ")
    print(G.edges())

GenerateGraph()
...
```

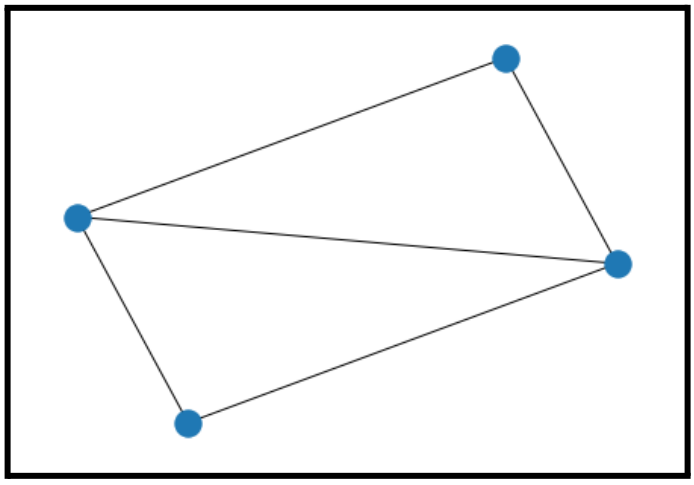
OUTPUT -

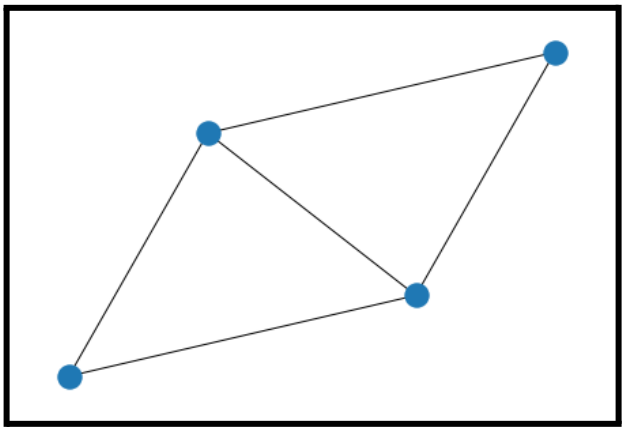
```
runfile('C:/Users/ckt/Documents/KUNAL-workspace/P5.py',
wdir='C:/Users/ckt/Documents/KUNAL-workspace')
Root Element => New Arrivals

----- Movie -----
Title: Enemy Behind
Type: War, Thriller
format: DVD
Rating: PG
description: Talk about a US-Japan war

----- Movie -----
Title: Transformers
Type: Anime, Science Fiction
format: DVD
Rating: R
description: A schientific fiction

----- Movie -----
Title: Trigun
Type: Anime, Action
format: DVD
Rating: PG
description: Vash the Stampede!

----- Movie -----
Title: Ishtar
Type: Comedy
format: VHS
Rating: PG
```

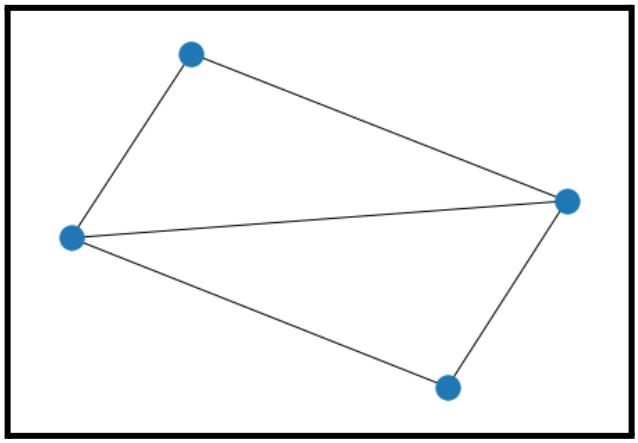
```
description: Viewable boredom
Nodes of Graph -
['a', 'b', 'c', 'd']
Edges of Graph -
[('a', 'b'), ('a', 'd'), ('a', 'c'), ('b', 'c'), ('c', 'd')]
...
```

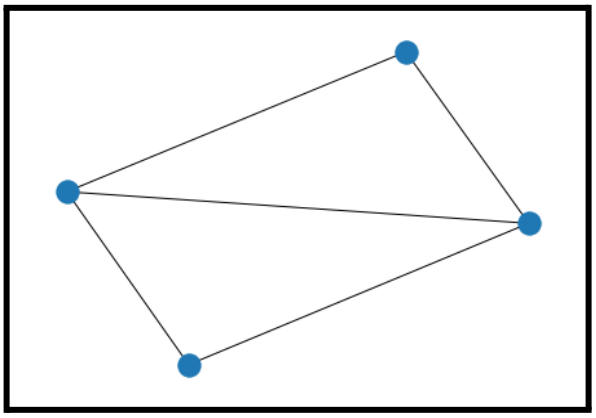












TYCS [ ]