

```

Edge 1 : [0, 1, 1]
Edge 2 : [0, 2, 1]
Edge 3 : [1, 2, 1]
Edge 4 : [2, 3, 1]

```

```

Edge 1 : [0, 1, 1]
Edge 2 : [0, 2, 1]
Edge 3 : [0, 5, 1]
Edge 4 : [2, 3, 1]
Edge 5 : [3, 4, 1]
Edge 6 : [4, 5, 1]

```

```

Edge 1 : [0, 1, 1]
Edge 2 : [0, 2, 1]
Edge 3 : [2, 3, 1]
Edge 4 : [2, 5, 1]
Edge 5 : [4, 5, 1]

[[0, 1, 1, 0, 0, 0], [0, 0, 0, 0, 0, 0], [0, 0, 0, 1, 0, 1], [0, 0, 0, 0, 0, 0], [0, 0, 0, 0, 0, 1], [0, 0, 0, 0, 0, 0]]

Node 0 : {(1, 1), (2, 1)}
Node 1 : set()
Node 2 : {(3, 1), (5, 1)}
Node 3 : set()
Node 4 : {(5, 1)}
Node 5 : set()

```

```

Edge 1 : [0, 1, 1]
Edge 2 : [0, 2, 1]
Edge 3 : [2, 3, 1]
Edge 4 : [2, 5, 1]
Edge 5 : [4, 5, 1]

[[0, 1, 1, 0, 0, 0], [0, 0, 0, 0, 0, 0], [0, 0, 0, 1, 0, 1], [0, 0, 0, 0, 0, 0], [0, 0, 0, 0, 0, 1], [0, 0, 0, 0, 0, 0]]

Node 0 : {(1, 1), (2, 1)}
Node 1 : set()
Node 2 : {(3, 1), (5, 1)}
Node 3 : set()
Node 4 : {(5, 1)}
Node 5 : set()

```

```

Edge 1 : [0, 2, 1]
Edge 2 : [4, 5, 1]

[[0, 0, 1, 0, 0, 0], [0, 0, 0, 0, 0, 0], [0, 0, 0, 0, 0, 0], [0, 0, 0, 0, 0, 0], [0, 0, 0, 0, 0, 1], [0, 0, 0, 0, 0, 0]]

Node 0 : {(2, 1)}
Node 1 : set()
Node 2 : set()
Node 3 : set()
Node 4 : {(5, 1)}
Node 5 : set()

```

```

class Graph:
    def __init__(self, nodeNum, directed=True):
        self.myNodeIP = nodeNum
        self.rangeNodes = range(self.myNodeIP)

        self.edgesList = []
        self.myMatrix = [[0 for column in
range(nodeNum)]
                        for row in range(nodeNum)]

        self.myDirected = directed
        self.adjList = {node: set() for node in
self.rangeNodes}

    def addEdge(self, node1, node2, connector):
        self.edgesList.append([node1, node2,
connector])
        self.myMatrix[node1][node2] = connector
        self.adjList[node1].add((node2,
connector))

        if not self.myDirected:
            self.edgesList.append([node1, node2,
connector])
            self.myMatrix[node2][node1] =
connector
            self.adjList[node2].add((node1,
connector))

    def edgeList(self):
        edgeCount = len(self.edgesList)
        for i in range(edgeCount):
            print("Edge ", i+1, ": ", self.edgesList[i])
            print()

    def matrix(self):
        print(self.myMatrix)
        print()

    def myList(self):
        for key in self.adjList.keys():
            print("Node", key, ": ", self.adjList[key])

```

```
graph = Graph(6)
```

```

graph.addEdge(0, 2, 1)
graph.addEdge(0, 4, 1)
graph.addEdge(1, 2, 1)
graph.addEdge(3, 5, 1)
graph.addEdge(4, 5, 1)

```

```

graph.edgeList()
graph.matrix()
graph.myList()

```