# LAB-8

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- **FORD_FULKERSON:**

- **Algorithm:**

```
print("enter number of edges:")
n=(int)(input())
edgem=[]
for i in range(0,n):
   t=[int(x) for x in input().split(',')]
   edgem.append(t)
print(edgem)
print("enter capacity of each edge in sequence of edges you entered")
cap=[]
for i in range(0,n):
   t=(int)(input())
   cap.append(t)
print(cap)
print("number of augmentic path")
a=(int)(input())
rescap=0

for j in range(0,a):
   print("enter the path from source to sink sapreted by space")
   t=[int(x) for x in input().split(' ')]
   mincap=max(cap)
   for i in range(0,len(t)-1):
      ind=edgem.index([t[i],t[i+1]])
      if mincap > (cap[ind]):
         mincap=cap[ind]
   print(rescap,mincap)
   rescap=rescap+mincap
   for i in range(0,len(t)-1):
      ind=edgem.index([t[i],t[i+1]])
      cap[ind]=cap[ind]-mincap
   print(cap)
print(rescap)
```

**Snapshot:**

```
enter number of edges:
8
0,1
0,2
1,3
2,1
2,4
3,5
4,3
4,5
[[0, 1], [0, 2], [1, 3], [2, 1], [2, 4], [3, 5], [4, 3], [4, 5]]
enter capacity of each in sequence
11
12
12
1
11
19
7
4
[11, 12, 12, 1, 11, 19, 7, 4]
number of  aug path
3
enter the path sapreted by space
0 1 3 5
0 11
[0, 12, 1, 1, 11, 8, 7, 4]
enter the path sapreted by space
0 2 1 3 5
11 1
[0, 11, 0, 0, 11, 7, 7, 4]
enter the path sapreted by space
0 2 4 3 5
12 7
[0, 4, 0, 0, 4, 0, 0, 4]
19
```

**Running time:**

This algorithm is used for finding maximum flow from network. We are giving augmentic path in input and based on that algorithm gives the maximum flow possible in given network.