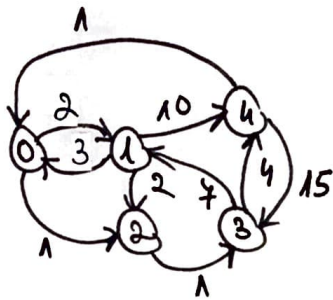


Bellman Ford Algorithm



$$s=0, t=4$$

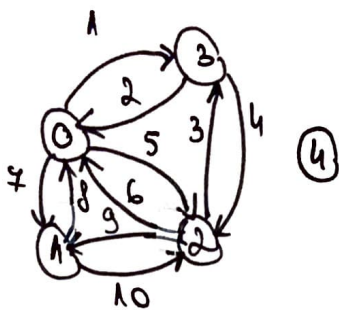
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STOP

The minimum cost walk from $s=0$ to $t=4$ has the cost distance[4] = 6 and it's build backward from predecessors dictionary

$$t=4, \text{prev}[4]=3, \text{prev}[3]=2, \text{prev}[2]=0=s$$

walk: $0 \xrightarrow{1} 2 \xrightarrow{1} 3 \xrightarrow{4} 4$



$$s=0, t=4$$

(4)

	changed	edge (x,y)	distance	predecessors																																																																																																																																		
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STOP

The distance from $s=0$ to $t=4$ is $\text{distance}[4] = \infty \Rightarrow$

\Rightarrow There doesn't exist a minimum cost walk from

$s=0$ to $t=4$

GRAPH 1K:

```
Type in the first vertex: 1
Type in the second vertex: 100
Minimum cost walk is: 141
Path is:
1 5 487 175 714 799 222 561 100
```

```
Type in the first vertex: 100
Type in the second vertex: 1
Minimum cost walk is: 196
Path is:
100 259 229 641 538 854 1
```

GRAPH 10K:

```
Type in the first vertex: 100
Type in the second vertex: 1
Minimum cost walk is: 238
Path is:
100 4442 3980 1974 407 4489 5162 2008 3631 2305 8336 1
```

```
Type in the first vertex: 1
Type in the second vertex: 100
Minimum cost walk is: 344
Path is:
1 7317 460 6010 5295 4560 5513 8467 3517 99 9159 6840 5177 7133 288 100
```

GRAPH 100K:

```
Type in the first vertex: 1
Type in the second vertex: 100
Minimum cost walk is: 304
Path is:
1 99842 59480 5210 19068 66428 33692 97073 23675 73057 100
```

```
Type in the first vertex: 100
Type in the second vertex: 1
Minimum cost walk is: 361
Path is:
100 85636 77467 52472 38155 40962 34650 29215 35260 1
```