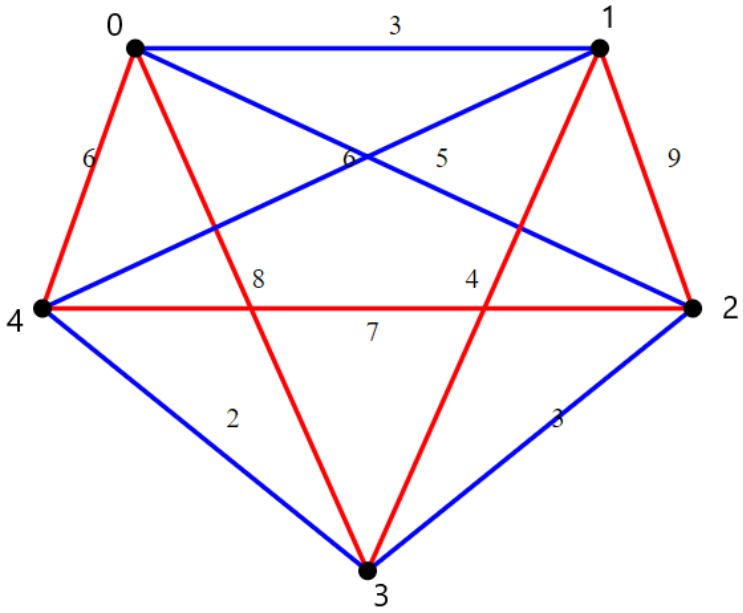
Assignment No. 5 Truta David Cristian

Graph with 5 vertices:

Ordered Edges:

(3, 4) 2
(0, 1) 3
(2, 3) 3
(1, 3) 4
(0, 2) 5
(0, 4) 6
(1, 4) 6
(2, 4) 7
(0, 3) 8
(1, 2) 9



We add edges that don't complete a cycle that includes all vertices AND that never have more than 2 edges meeting at a vertex:

It1: (3,4) is added

It2: (0,1) is added

It3: (2,3) is added

It4: (1,3) is not added (more than 2 edges meeting at a vertex)

It5: (0,2) is added

It6: (0,4) is not added (completes a cycle that doesn't have all the vertices)

It4: (1,4) is added (completes a cycle that has all the vertices) → Algorithm stops here

Input File:

5 10
0 1 3
3 4 2
2 3 3
1 3 4
1 4 6
2 4 7
0 3 8
0 4 6
1 2 9
0 2 5

```
==========================================
Nr of Vertices: 5          Nr of Edges: 5
 Edges:
   (3, 4) 2
   (0, 1) 3
   (2, 3) 3
   (0, 2) 5
   (1, 4) 6

Command took 0.0 to execute.
```

The two graphs:

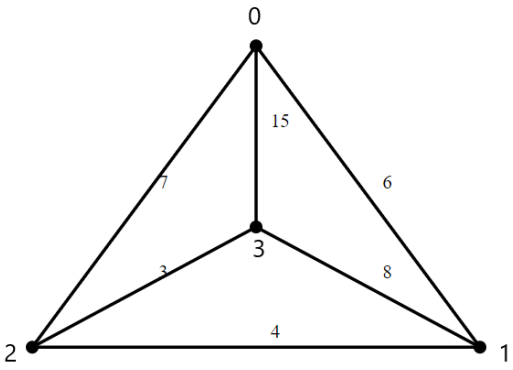
1.

Input File:

```
4 6
0 1 6
1 2 4
0 2 7
0 3 15
2 3 3
1 3 8
```

```
==========================================
Nr of Vertices: 4          Nr of Edges: 4
 Edges:
   (2, 3) 3
   (1, 2) 4
   (0, 1) 6
   (0, 3) 15

Command took 0.0 to execute.
```



2.

Input File:

```
4 6
0 1 6
1 2 5
0 2 3
0 3 15
2 3 4
1 3 8
```

```
==========================================
Nr of Vertices: 4          Nr of Edges: 4
 Edges:
   (0, 2) 3
   (2, 3) 4
   (0, 1) 6
   (1, 3) 8

Command took 0.0 to execute.
```