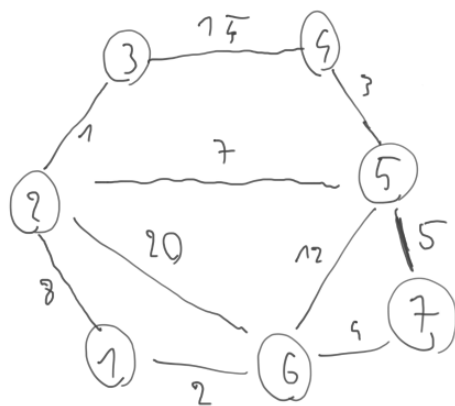
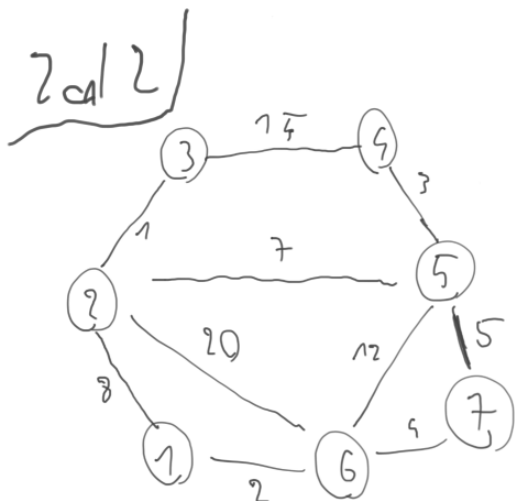
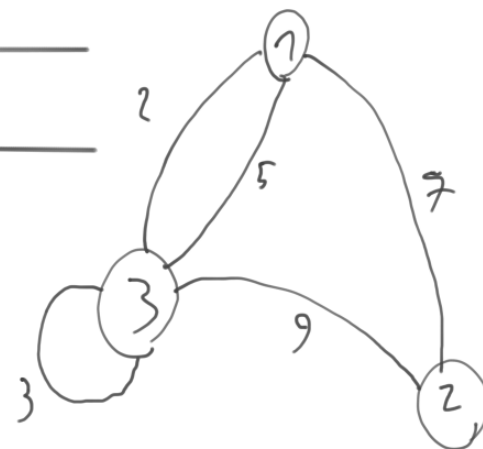


Zad 1

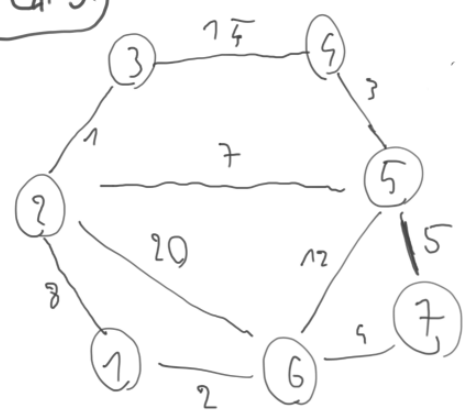




|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 1 |   | 1 |   |   |   | 7 |   |
| 2 | 1 | 0 | 1 |   | 1 | 4 | - |
| 3 |   | 1 | 0 | 1 |   |   |   |
| 4 |   |   | 1 | 0 | 1 |   |   |
| 5 |   | 1 |   | 1 | 0 | 1 | 1 |
| 6 | 1 | 1 |   |   | 1 | 0 | 1 |
| 7 |   |   |   |   | 1 | 1 | 0 |

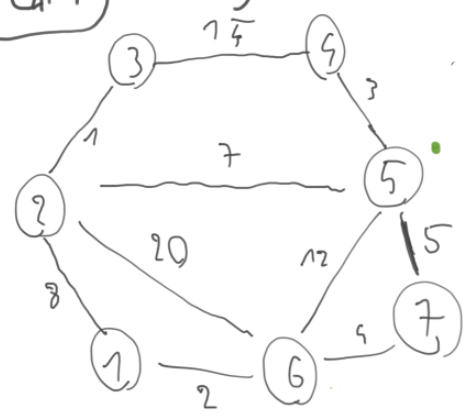


2 and 3



- 1: 2, 6
- 2: 1, 3, 5, 6
- 3: 2, 4
- 4: 3, 5
- 5: 2, 4, 6, 7
- 6: 1, 2, 5, 7
- 7: 5, 6

2a/4 DFS



- 1: 2, 6
- 2: 1, 3, 5, 6
- 3: 2, 4
- 4: 3, 5
- 5: 2, 4, 6, 7
- 6: 1, 2, 5, 7
- 7: 5, 6

5 → 2 → 1 → 6 → 7 → 3 → 4

dodaję od największej do najmniejszej

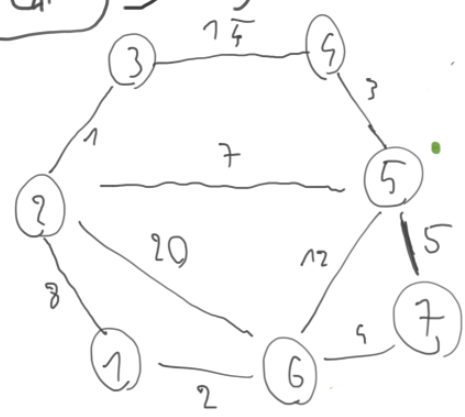
S: ~~7~~ 6 4 ~~6~~ ~~\*~~ ~~\*~~ ~~\*~~ ~~\*~~

deklaracje true ↓ usunam ostatnie 2 ↑

N: 5 → 2 → 1 → 6 → 7 → 3 → 4

1 2 3 4 5 6 7

20/5 BFS

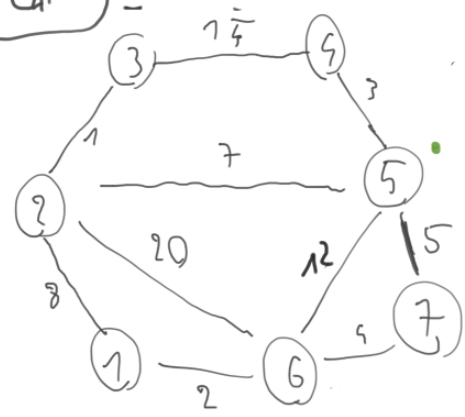


- 1: 2,6
- 2: 1,3,5,6
- 3: 2,4
- 4: 3,5
- 5: 2,4,6,7
- 6: 1,2,5,7
- 7: 5,6

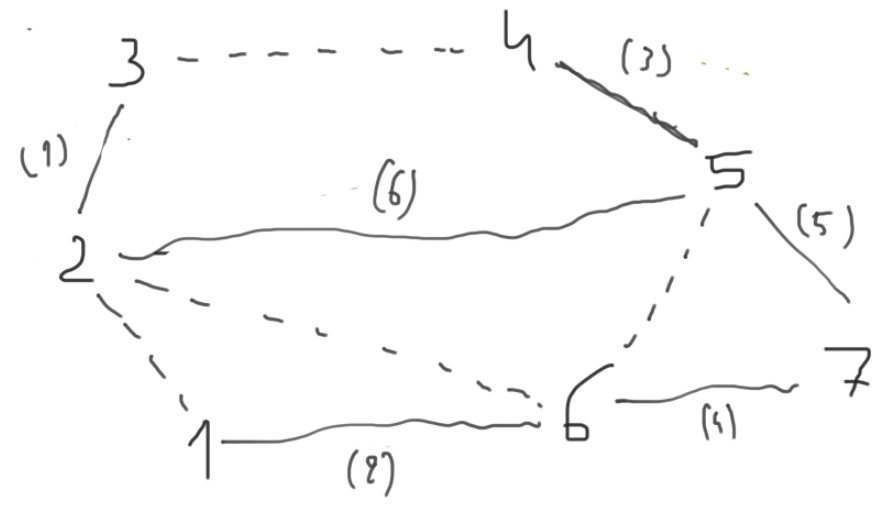
biale z poczatek i ciagami  
Q: ~~2~~ ~~3~~ ~~4~~ ~~5~~ ~~6~~ ~~7~~ 6 3 1 7  
↓  
adajta  
5 → 2 → 4 → 6 → 7 → 1 → 3

1 2 3 4 5 6 7  
T F T T T T F

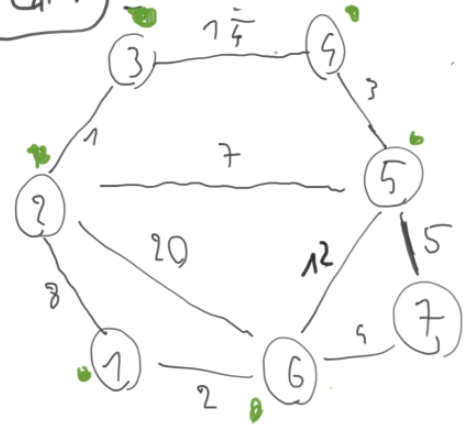
2a/6



- 1: 2, 6
- 2: 1, 3, 5, 6
- 3: 2, 4
- 4: 3, 5
- 5: 2, 4, 6, 7
- 6: 1, 2, 5, 7
- 7: 5, 6



2nd/7



- 1: 2, 6
- 2: 1, 3, 5, 6
- 3: 2, 4
- 4: 3, 5
- 5: 2, 4, 6, 7
- 6: 1, 2, 5, 7
- 7: 5, 6

|   | 1 | 2 | 3 | 4  | 5 | 6  | 7  |
|---|---|---|---|----|---|----|----|
| d | ∞ | ∞ | 0 | ∞  | ∞ | ∞  | ∞  |
| p | 9 | 1 |   | 15 | 8 | 9  | 13 |
|   |   |   |   | 11 |   | 20 | 11 |

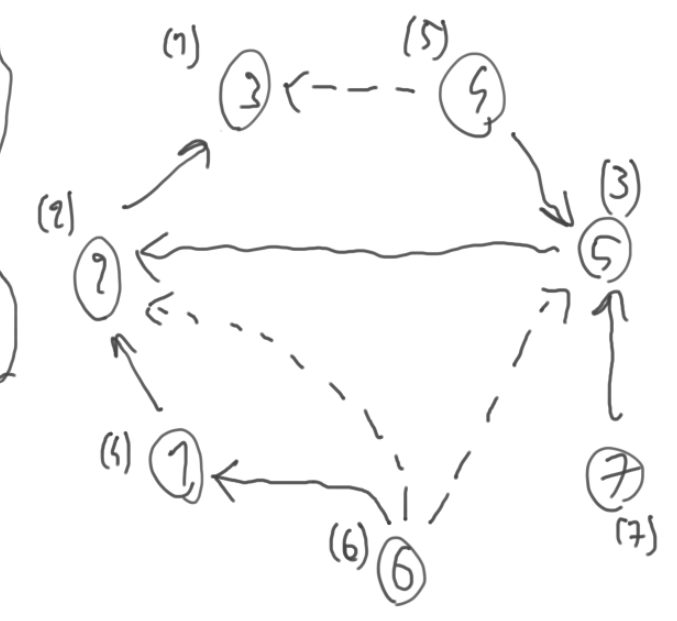
|                  | 1  | 2  | 3  | 4  | 5  | 6  | 7  |
|------------------|----|----|----|----|----|----|----|
| p                | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| p <sub>rev</sub> | 2  | 3  |    | 3  | 2  | 2  | 5  |
|                  |    |    |    | 5  |    | 5  | 1  |

1

PQ: 3  
 1) u=3  
 v=2  
 • d[2]=1  
 p[2]=3  
 v=5  
 d[5]=15  
 p[5]=3  
 PQ: 2, 4

2) u=2  
 v=1  
 • d[1]=8 + d[0]=9  
 p[1]=2  
 v=3  
 d[3]=d[0]+1=2  
~~p[3]=2~~ Don't  
 v=5  
 d[5]=d[2]+7=8  
 p[5]=2  
 v=6  
 d[6]=d[2]+20=21  
 p[6]=v=2  
 PQ = 4, 1, 5, 6  
 3) u=5 d[5]=8  
 v=3 d[3]=d[5]+3=11  
 p[3]=5  
 v=6 d[6]=8+20=28  
 p[6]=5  
 v=7 d[7]=8+5=13  
 p[7]=5  
 PQ = 1, 3, 6, 7

if  $d[v] > d[u] + w(u,v)$ :  
 $d[v] =$   
 $p[v] =$   
 $d \leftarrow \text{key}(v)$   
 decus key



2

|   | 1 | 2 | 3  | 4  | 5 | 6  | 7  |
|---|---|---|----|----|---|----|----|
| d | 9 | 1 | 0  | 11 | 8 | 11 | 13 |
| p | 2 | 3 | -1 | 5  | 2 | 1  | 5  |