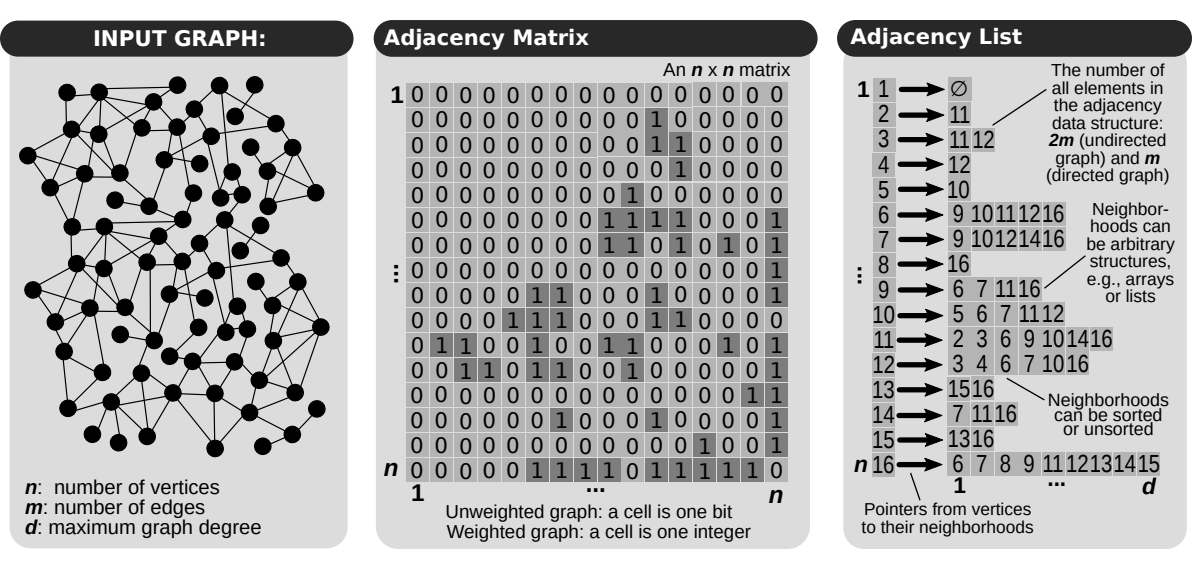
INPUT GRAPH:
n: number of vertices
m: number of edges
d: maximum graph degree
Adjacency Matrix
An n x n matrix
1
n
1
...
n
Unweighted graph: a cell is one bit
Weighted graph: a cell is one integer
Adjacency List
1 ∅
2 11
3 11 12
4 12
5 10
6 9 10 11 12 16
7 9 10 12 14 16
8 16
9 6 7 11 16
10 5 6 7 11 12
11 2 3 6 9 10 14 16
12 3 4 6 7 10 16
13 15 16
14 7 11 16
15 13 16
n 16 6 7 8 9 11 12 13 14 15
1
...
d
The number of all elements in the adjacency data structure: 2m (undirected graph) and m (directed graph)
Neighbor-hoods can be arbitrary structures, e.g., arrays or lists
Neighborhoods can be sorted or unsorted
Pointers from vertices to their neighborhoods