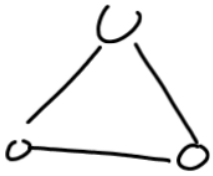
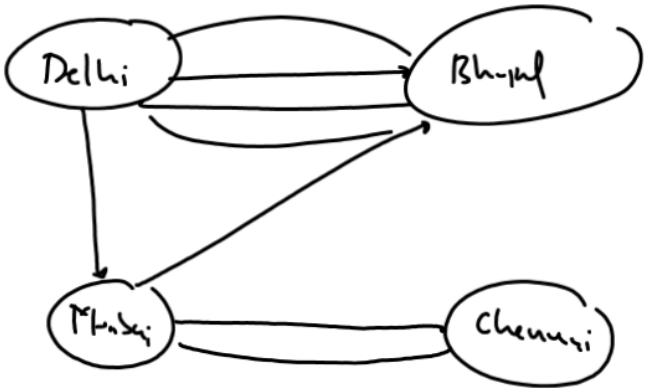
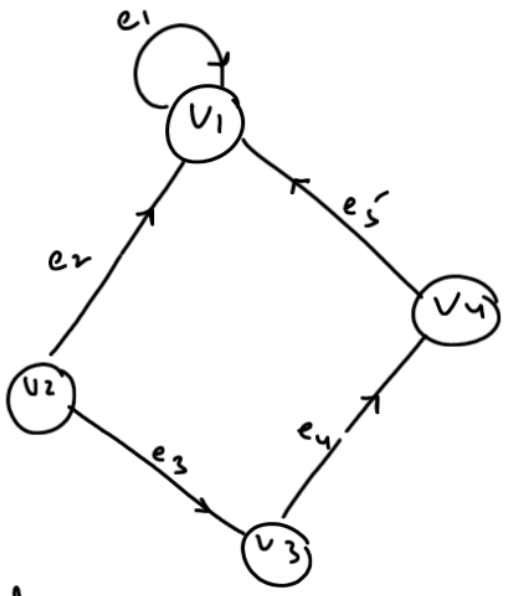
Graph



(Another non-linear data Struct)



$$G = (V, E)$$



① Adjacent Nodes

② Directed / Undirected Edges : >

③ Directed / Undirected Graph

④ Mixed Graph

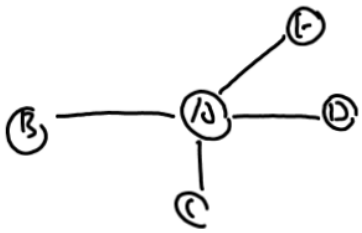
⑤ Initial / Terminal Vertices

⑥ Sling / Self Loop

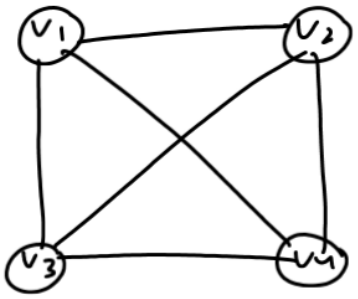
⑦ Parallel Edges

⑧ Weighted Graph

⑨ Tree Graph



⑩ Complete Graph



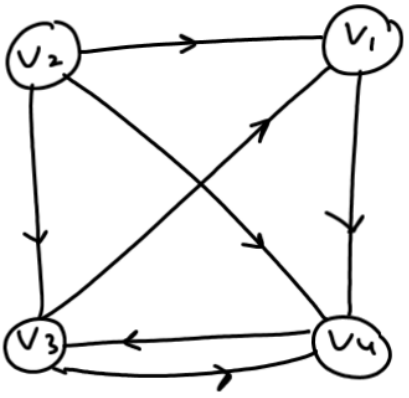
⑪ Indegree

⑫ Outdegree

Representing a Graph In Memory

- **Array Representation**
  1. Adjacency Matrix Rep
- **Linked List Representation**
  1. Adjacency List Representation

Adjacency Matrix Representation



V[I] to V[J]

	v_1	v_2	v_3	v_4
v_1	0	0	0	1
v_2	1	0	1	1
v_3	1	0	0	1
v_4	0	0	1	0

Code For Adjacency Matrix