Day - 197

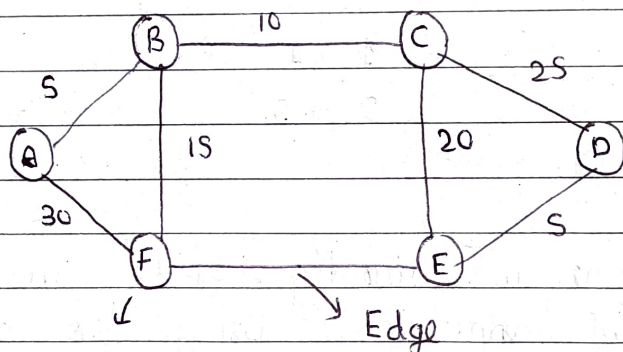### Graph

* ### Introduction to Graph:

⇒ Graph is a non-linear data structure consisting of vertices & graphs.
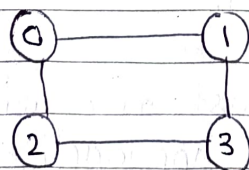
Ex:

Node (Vertex)

⇒ Graphs are used everywhere such as in map applications, showing suggestions and many more.
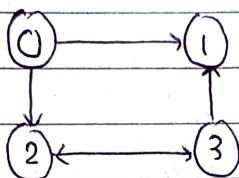
Types of Graphs
⇒ ### Undirected Graph
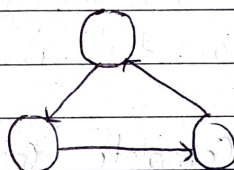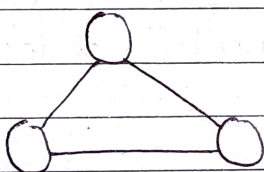⇒ Here, there is no direction of edges.

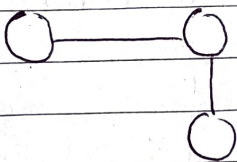⇒ <u>Directed Graph:</u>

⇒ Here, we have direction in the edges.
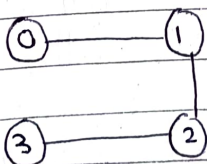

⇒ <u>Cyclic Graph:</u>

⇒ <u>Acyclic Graph:</u>
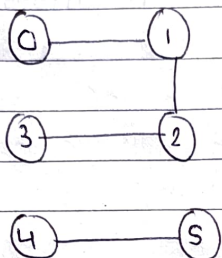

* <u>Connected Graph:</u>

⇒ If we can go from any node then that graph is connected graph.
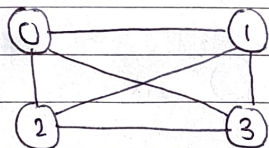
*   <u>Disconnected Graph:</u>

⇒

⇒ Here, we can't go from 0 to 5 or 4, so, this is disconnected graph.

*   <u>Complete Graph:</u>

⇒ If there is a graph in which every node is connected to other node then that graph is complete graph.

⇒ No. of edges $= {}^nC_2 = \dfrac{n(n-1)}{2}$