**Graphs:**

A graph data structure consists of a finite (and possibly mutable) set of vertices (also called nodes or points), together with a set of unordered pairs of these vertices for an undirected graph or a set of ordered pairs for a directed graph.

Graphs are mathematical structures that reflect the pairwise relationship between things. A graph is a type of flow structure that displays the interactions of several objects. It may be represented by utilizing the two fundamental components, nodes and edges.

* **Nodes**: These are the most crucial elements of every graph. Edges are used to represent node connections. For example, a graph with two nodes connected using an undirected edge shows a bi-directional connection between those two nodes.
* **Edges**: Edges are part of a graph showing the connections between nodes. An edge represents the connection between two nodes.

**An application in real life**

* **Google Maps**: link your journey from the start to the end.
* **Social Networks**: friends are connected with each other using an edge where each user represents a vertex.
* **Recommendation System**: relationship data between user’s recommendations uses graphs for connection.