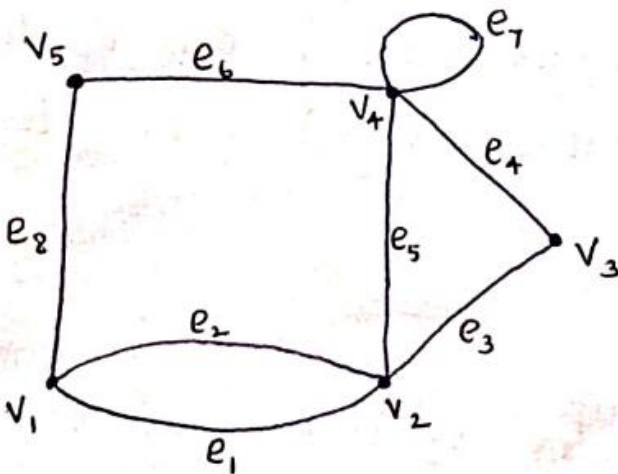


Graph

A graph $G = (V, E, \phi)$ consists of a non empty set $V = \{v_1, v_2, \dots\}$ called the set of nodes (Points, Vertices) of the graph, $E = \{e_1, e_2, \dots\}$ is said to be the set of edges of the graph and ϕ is a mapping from the set of edges E to set of ordered or unordered pair of elements of V .





Self Loop

If there is an edge from v_i to v_i , then that edge is called self loop or loop.

For example, the edge e_7 is called a self loop.

Parallel Edges

If two edges have same end points then the edges are called parallel edges.

For example; the edge e_1 and e_2 are called parallel edges since e_1 and e_2 have the same pair of vertices (v_1, v_2) as their terminal vertices.



Incident

If the vertex v_i is an end vertex of some edge e_k then e_k is said to be incident with v_i .

Adjacent edges and vertices

Two edges are said to be adjacent if they are incident on a common vertex.

Two vertices v_i and v_j are said to be adjacent if $v_i v_j$ is an edge of the graph.