* Graphs:
  + Graph G = (V, E) : A set of vertices V, and a set of edges E; each edge in E is a connection between a pair of vertices in V, which are called adjacent vertices.
  + The number of vertices is written as |V|
  + The number of edges is written as |E|
  + 0 <= |E| <= |V|2
* Sparse Graph:
  + Has “few” edges (relative to |V|)
* Dense Graph:
  + Has “many” edges (relative to |V|)
* Undirected Graph:
  + Connections (edges) between nodes (vertices) are not directional. Meaning that the connection gos both ways.
* Directed Graph:
  + Widely used in map implementation.
* Weighted Graph:
  + Indegree, means the number of edges that lead to (point at) a node/vertex
* Path:
  + A list of nodes that will be visited while traversing connections between nodes
  + A pat is simple if all vertices (nodes) in the path are distinct
* Cycle:
  + A path that returns back it its starting node
  + A cycle is a simple cycle if every node in the cycle is distinct
* Sub-Graph:
  + An undirected graph is connected if there is at least one path from any vertex to any other vertex.
  + The maximum connected subgraphs of an undirected graph are called connected components.
* A graph without cycles is acyclic