Assignment-6

Ans) There is a Adjacency List and a Adjacency Matrix.
First, we take the input of whether the graph is directed or undirected.
Then there is an option to add an edge where, a vector is pushed back with all the elements 0 in the adjacency matrix, and a column with each 0 is inserted.

- To insert in a Adjacecy List we just insert an empty vector into the List.
- To add an edge we input the two vertices, and if possible we add an edge between them by inserting a new element in the adjacency list of both the vertices if undirected and only the first one if it is directed graph. Then, we set the adjMat[u][v] value to true, implying that an edge exists between them
- To remove a vertex we first erase the whole vector row from the adjacency List and from the Adjacency Matrix. After this we erase tha column from the Adjacency Matrix and from the Adjacency list we erase all the occurs of that element in the others vectors.
  For the remaining elements which have index greater than the one to be removed we decrease its value by 1. So as to match the resized value.