ALERT!

1. The objective of this lab is understanding graph data structure.
2. This is an individual lab, you are strictly **NOT** allowed to discuss your solution with fellow colleagues, even not allowed asking how is he/she is doing, it may result in negative marking. You can **ONLY** discuss with your TAs or with me.
3. Beware of memory leaks and dangling pointers.

Task 01: [30 Marks]

Implement some basic graph functions. You may consider following ADT with adjacency matrix representation.

```
class Graph
{
    private:
      int noOfVertices;
      int** graph;
      // you may have more member variables as required by your logic.

    public:
      Graph(int vertices);
      void addEdge(int v1, int v2);
      void deleteEdge(int v1, int v2);
      void display();
      void DFS(int startVertex);
      void BFS(int startVertex);
      bool isAcyclic(int startVertex); // Returns false if graph is cyclic otherwise true.
 };
```