

## Graph Design Analysis

The new classes that we wrote are Graph.h, Graph.cpp, and pathfinder.cpp. We decided to create a friend class for the Node (vertices) class inside the Graph class to make our implementation easier as we do not have to have implement the public getter and setter methods for accessing the member of the Node class. To represent the graph, we went with an approach where graph is represented with adjacency list. We did not define a new structure for the edges as we keep all the neighbor edges of the nodes as a vector inside the class member themselves. Apart from that, to differentiate each node in the graph, we give them index and save the actor names inside the member class. This is done because we want to be able to have direct access to the pointer that points to each node inside a vector when we pass this vector into the method where we will run BFS to find the shortest path from a source to a vertex.