

Name:.....

Q17

CS2123 Data Structures

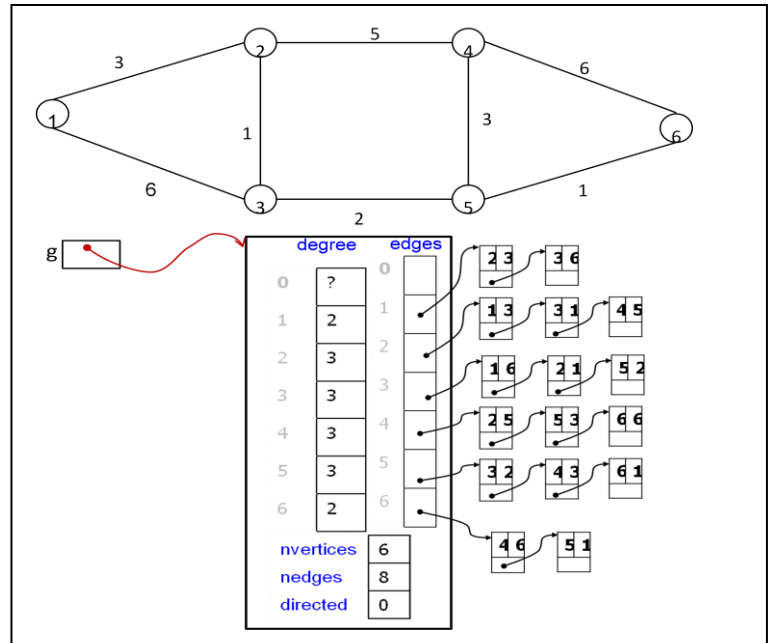
Suppose we use the following structures to represent a graph using **adjacency list** and read the information about the below graph from a file. Accordingly, we create its adjacency list as shown below.

```
#define MAXV 6

typedef struct edgenode {
    int y;
    int w;
    struct edgenode *next;
} edgenodeT;

typedef struct {
    edgenodeT *edges[MAXV+1];
    int degree[MAXV+1];
    int visited[MAXV+1];
    int parent[MAXV+1];
    int distance[MAXV+1];
    int nvertices;
    int nedges;
    bool directed;
} graphT;

graphT *g;
```



Now we want to find the shortest path from node 6 to all other nodes. You are asked to trace the Dijkstra's algorithm by showing the changes in distance and parent information at each node...

How about a graph like this?

