Homework Project 3

Given 04/16/2018, Due 05/02/2018

Write a function that implements Dijkstra's algorithm, and finds the shortest path from a given vertex to the most distant vertex. The given graph has positive edge-lengths.

You write a function

```
struct edge_list * Dijkstra(int n, int *graph, int start);
```

The vertices of the graph are numbered 0 to `n` − 1; `start` is the start vertex and `graph` is the pointer to the start of the distance matrix. If `*(graph +n*i +j)` is less than 100, that number is the distance from vertex `i` to vertex `j`; else the two vertices are not connected by an edge. Your function returns a list of edges

```
struct edge_list { int u; int v; struct edgelist * next};
```

which are the edges on the shortest path from `start` to the vertex with largest distance from `start`.

Submit your source code by e-mail to `phjmbrass@gmail.com`; include the course (220) and homework number in the subject line, and your name as a comment in the homework file. Do not include my test code in your submission.