Conception and Implementation of Spatial Analysis Methods

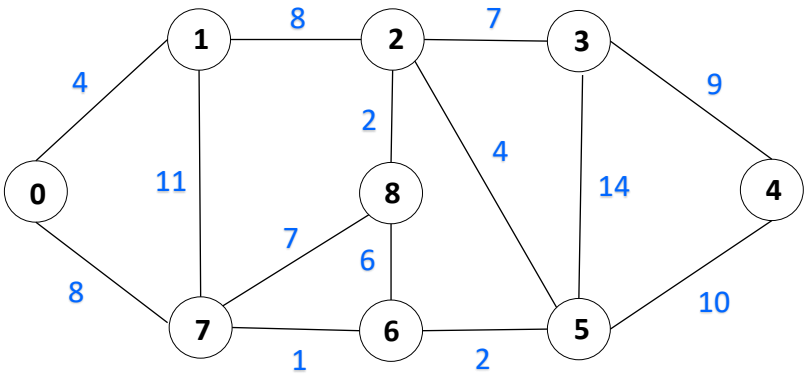
Lab 10

Single-Source Shortest Path
Dijkstra algorithm

ASSIGNMENT

Given the graph below write a function that finds the Shortest Path from one start vertex (source) to all other vertices in that graph (implement Dijkstra algorithm).

- use the graph classes from Lab 9
- for finding the shortest distance in each iteration use priority_que (`#include <queue>`)
- write a function for printing the results: vertices and their shortest path values



HINT:
Structure used for comparing vertices in a priority_que:

```
struct CompareVertices
{
    bool operator ()(Vertex*  v1, Vertex* v2)
    {
           return v1->shortest_distance > v2->shortest_distance;
    }
};
```