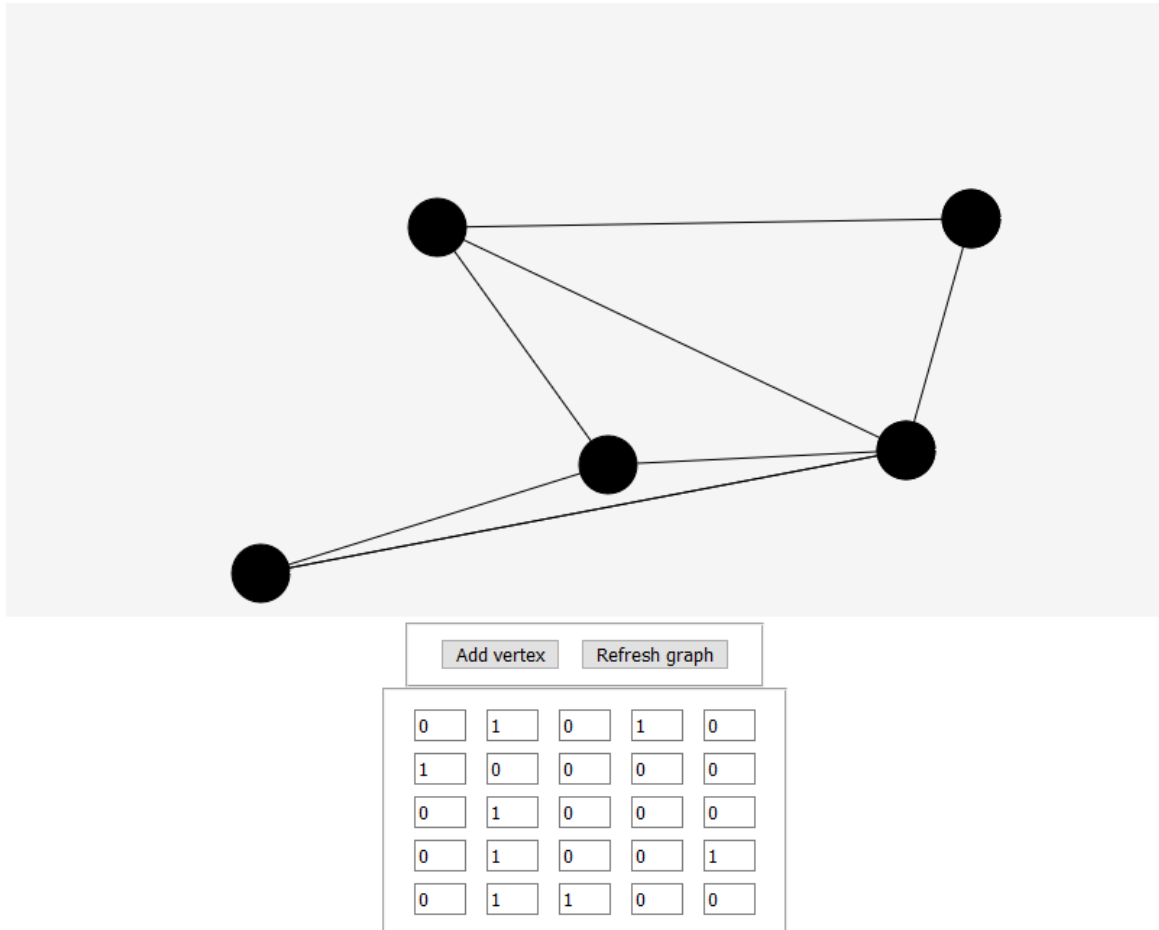# From HTML to PostGIS – Task 2

Simple Graph Editor

1. Your task is to implement simple graph editor in Java Script. The final effect should be similar as presented below.

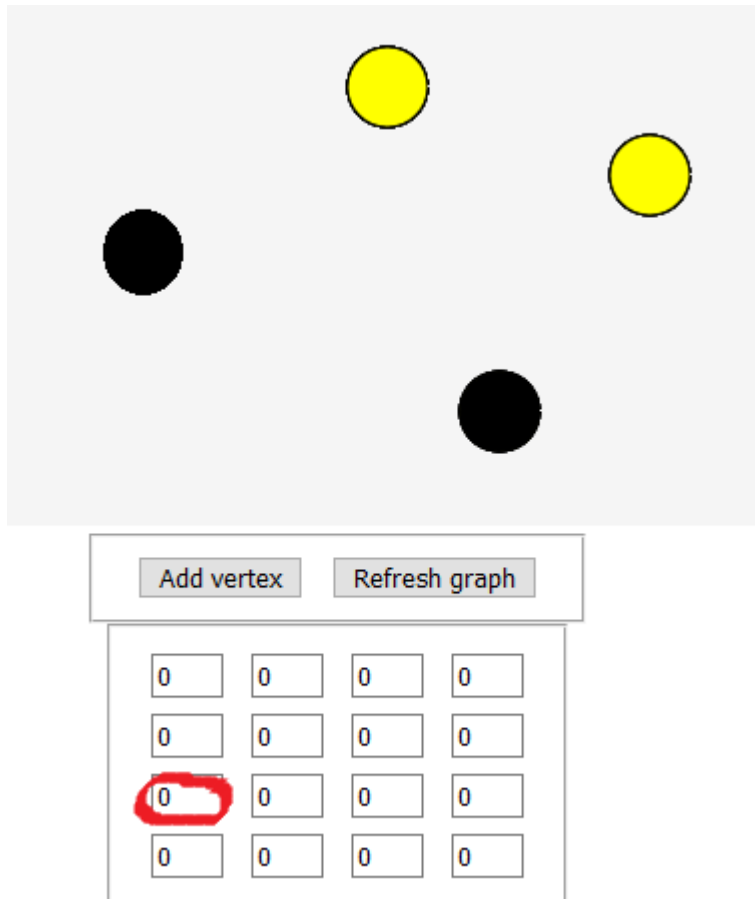2. There are three files in archive with task:
   - index.html
   - style.css
   - script.js

   HTML and CSS files are complete - use them. You should edit only script.js file and write all code inside it.
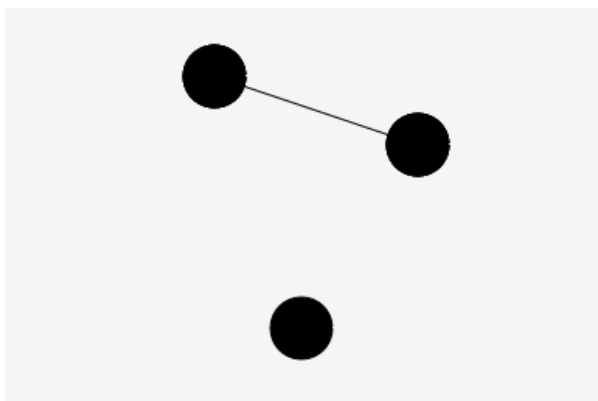
3. **Detailed requirements:**
   a) user can add new vertex to the graph by clicking the button „Add vertex"
   b) when user clicks „Add vertex" button the new row and the new column in graph matrix appear (graph matrix is a table with id *graph*). In each new table cell there is an input field with default value „0"

c) when user clicks „Add vertex" button the new vertex appears in graph canvas in random position (radius = 20 px)

d) when user focus the input field into the graph matrix, the two (or one if it is diagonal cell) vertices are marked with yellow colour as presented below:

e) when user change value in input to "1" new edge between vertices appear. We assume the graph is directed, but we draw edges without their direction, as presented below:

f) when user clicks "Refresh graph" button the new vertex positions are drawn randomly and the graph is redrawn

4. **Points:**
   a) add vertex to graph matrix (add new row and column with input) – 2 points
   b) add graph vertex in random position – 1 point
   c) mark selected vertices on input focus - 1.5 points
   d) input validation in graph matrix – possible values are "0" (no edge) and "1" (there is an edge between vertices) – 0.5 point
   e) draw edges between appropriate vertices (new edge appears when the value in input field changed to "1") – 1.5 points
   f) implement "Refresh buton" – 1 point
   g) avoid global variables – 0.5 point

Good luck!