**Question 1**. Show how to compute the shortest paths between all pairs of vertices in the graph attached

using the Floyd-Warshall algorithm. It is enough to give the D matrix at the end of each iteration.  
  
*procedure floydWarshall (graph)*

*// Initialize a matrix to store the shortest distances*

*let matrix be a |V| x |V| array of integers*

*for each vertex v in graph*

*for each vertex u in graph*

*matrix[v][u] = graph[v][u]*

*end for*

*// Find the shortest paths between all pairs of vertices*

*for each vertex k in graph*

*for each vertex i in graph*

*for each vertex j in graph*

*if matrix[i][k] + matrix[k][j] < matrix[i][j]*

*matrix[i][j] = matrix[i][k] + matrix[k][j]*

*end if*

*end for*

*end for*

*end for*

*// Print the resulting matrix with shortest distances*

*printMatrix(matrix)*

*end procedure*

D1:

D2:

D3:

D4:

D5: