

1 (a)

The code reads the first line of the ~~code~~ input file and assigns the values of N and M to the variables $v[\text{vertex}]$ and $e[\text{edge}]$. It creates two dimensional list called `adj.mat`, which will store the adjacency matrix. The list has $v+1$ rows and $v+1$ columns, and each element is initialized to 0. The extra row and column are for indexing convenience, since the vertices are numbered from 1 to v . It loops through the next e lines of the input file, each containing three integers. The code assigns the value of w to the element at row u and column v in the `adj.mat` list. This way the adjacency matrix is filled with the weights of the edges. It loops through the `adj.mat` list and writes each element to the output file, separated by a space.