Step-by-Step Pseudocode for Hungarian Algorithm

1. Input the cost matrix (square matrix of size n x n).

2. Row Reduction:  
 For each row, subtract the smallest value in that row from every element in the row.

3. Column Reduction:  
 For each column, subtract the smallest value in that column from every element in the column.

4. Cover all zeros in the matrix using a minimum number of horizontal and vertical lines.

5. Test for Optimality:  
 - If the minimum number of lines equals n, an optimal assignment is possible.  
 - If not, go to the next step.

6. Adjust the Matrix:  
 - Find the smallest element not covered by any line.  
 - Subtract it from all uncovered elements.  
 - Add it to elements at the intersections of lines.  
 - Go back to Step 4.

7. Make the Assignment:  
 - Find a set of zeros such that no two are in the same row or column.  
 - This forms the optimal assignment.

8. Output the assignments and total minimum cost.