

Adjacency Matrix Representation of Graph

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// Adjacency Matrix representation in C

#include <stdio.h>
#define V 4

// Initialize the matrix to zero
void init(int arr[][V]) {
    int i, j;
    for (i = 0; i < V; i++)
        for (j = 0; j < V; j++)
            arr[i][j] = 0;
}

// Add edges
void addEdge(int arr[][V], int i, int j) {
    arr[i][j] = 1;
    arr[j][i] = 1;
}

// Print the matrix
void printAdjMatrix(int arr[][V]) {
    int i, j;

    for (i = 0; i < V; i++) {
        printf("%d: ", i);
        for (j = 0; j < V; j++) {
            printf("%d ", arr[i][j]);
        }
        printf("\n");
    }
}

int main() {
    int adjMatrix[V][V];

    init(adjMatrix);
    addEdge(adjMatrix, 0, 1);
    addEdge(adjMatrix, 0, 2);
    addEdge(adjMatrix, 1, 2);
    addEdge(adjMatrix, 2, 0);
    addEdge(adjMatrix, 2, 3);

    printAdjMatrix(adjMatrix);

    return 0;
}
```