```c
//1.
#include <stdio.h>

int n, a[10][10], p[10][10];

void path() {
    int i, j, k;
    for (i = 0; i < n; i++) {
        for (j = 0; j < n; j++)
            p[i][j] = a[i][j];
    }

    for (k = 0; k < n; k++) {
        for (i = 0; i < n; i++) {
            for (j = 0; j < n; j++) {
                if (p[i][k] == 1 && p[k][j] == 1) {
                    p[i][j] = 1;
                }
            }
        }
    }
}

int main() {
    int i, j;

    printf("Enter the number of nodes:");
    scanf("%d", &n);
    printf("\nEnter the adjacency matrix:\n");
```

```c
    for (i = 0; i < n; i++) {

        for (j = 0; j < n; j++) {

            scanf("%d", &a[i][j]);

        }

    }


    path();


    printf("\nThe path matrix is shown below\n");


    for (i = 0; i < n; i++) {

        for (j = 0; j < n; j++) {

            printf("%d ", p[i][j]);

        }

        printf("\n");

    }


    return 0;

}
```