

Write program to obtain the Topological ordering of vertices in a given digraph.

```
#include <stdio.h>
```

```
int n, a[10][10], res[10], s[10], top = 0;
```

```
void dfs(int, int, int[][10]);
```

```
void dfs_top(int, int[][10]);
```

```
int main() {
```

```
    int i, j;
```

```
    printf("Enter the number of nodes: ");
```

```
    scanf("%d", &n);
```

```
    printf("Enter the adjacency matrix:\n");
```

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

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

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

```
        }
```

```
    }
```

```
    dfs_top(n, a);
```

```
    printf("Topological Sort Order: ");
```

```
    for (i = n - 1; i >= 0; i--) {
```

```
        printf("%d ", res[i]);
```

```
    }
```

```
    printf("\n");
```

```
    return 0;
}
```

```
void dfs_top(int n, int a[][10]) {
    int i;
    for (i = 0; i < n; i++) {
        s[i] = 0;
    }
```

```
    for (i = 0; i < n; i++) {
        if (s[i] == 0) {
            dfs(i, n, a);
        }
    }
}
```

```
void dfs(int j, int n, int a[][10]) {
    s[j] = 1;
    int i;
    for (i = 0; i < n; i++) {
        if (a[j][i] == 1 && s[i] == 0) {
            dfs(i, n, a);
        }
    }
    res[top++] = j;
}
```

Output

Enter the number of nodes: 2

Enter the adjacency matrix:

2

6

9

6

Topological Sort Order: 1 0

=== Code Execution Successful ===