## **PROGRAM 2**

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

CODE:

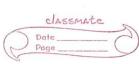
```
#include<stdio.h>
#include<stdlib.h>
int visited[30], j, res[30];
void dfs(int u, int n, int Adj[30][30]) {
  int v;
  visited[u] = 1;
  for (v = 0; v < n - 1; v++) {
     if (Adj[u][v] == 1 \&\& visited[v] == 0) {
       dfs(v, n, Adj);
     }
  i += 1;
  res[i] = u;
void topological order(int n, int Adj[30][30]) {
  int i, u;
  for (i = 0; i < n; i++)
     visited[i] = 0;
  }
  j = 0;
  for (u = 0; u < n; u++) {
     if (visited[u] == 0) {
       dfs(u, n, Adj);
  return;
int main() {
  int Adj[30][30], n, i, j;
```

```
printf("Enter number of vertices\n");
  scanf("%d", &n);
  printf("Enter the Adjacency matrix\n");
  for(i=0;i<n;i++)
  for(j=0;j<n;j++)
  scanf("%d",&Adj[i][j]);
  printf("\nTopological order:\n");
  topological_order(n, Adj);
  for (i = n; i >= 1; i--) {
     printf("%d\t", res[i]);
  }
  return 0;
}
```

## **OUTPUT**:

## **OBSERVATION:**

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classmate portion inipolarity rustriellos); scanf ( 1.d. 40); print ( Enter the Adjauncy material"); ikn: (44) for (j=0:, j=n; j=1)

reanf("xd", 4Adj(iJCjJ); printy ( In Jop dogued Order: 10): topological-order (n. Adj); print( xdt", rusCiJ); return 0; Output :-Graph ? (1). 2 VA vestices: The horizon Ender yerticu Enter the adjacency matrin: O 111 00100 00100 000 00011 0000 000 0 1 0010 00000 Topological Ordes: 3