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LAB-3

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

int visited[50], graph[10][10], n, stack[10];
top = -1;
void topological_sort (int node)
{ visited[node] = 1;

  for (int j=0; j<n; j++)
  { if (graph[node][j]==1 && visited[j]!=1)
    { topological_sort (j);
    }
  }
  stack[top++] = node;
}

int main()
{ printf("Enter number of nodes\n");
  scanf("%d", &n);
  printf("Enter the matrix\n");
  for (int i=0; i<n; i++)
  { for (int j=0; j<n; j++)
    { int key;
      scanf("%d", &key);
      graph[i][j] = key;
    }
  }
  for (int i=0; i<n; i++)
  { topological_sort(i);
  }
```

```
printf ("\n Topological Sort \n");
while (top != -1)
    { printf ("%d", stack [top--]);
    }
return 0;
}
```

Output:

Enter number of nodes
4
Enter the matrix
0 0 0 0
1 0 0 0
1 0 0 0
0 1 1 0
Topological sort
3 2 1 0 //

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```
Enter Number of nodes
4
Enter the matrix
0 0 0 0
1 0 0 0
1 0 0 0
0 1 1 0


TOPOLOGICAL SORT
3 2 1 0

Process returned 0 (0x0)   execution time : 24.248 s
Press any key to continue.
```