Bafna Gold
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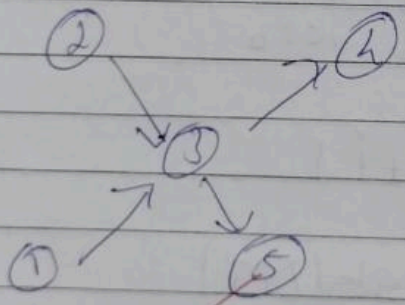
22/6/23 Topological sort

```
#include<stdio.h>
void dfs (int u, int n, int visited[], int
  adj matrix[][], int t[], int *k)
{ int v;
  visited[u] = 1;
for (v=0; v<n; v++)
    { if (adj matrix[u][v] == 1 &&
visited[v])
  { dfs (v, n, visited, adj matrix, t, k);
  }
}
t[(*k)++] = u;
}
void topological sort (int n, int adjmatrix[10][10])
{
int visited[10] = {0};
  int t[10], k=0;
    int i;
for(i=0; i<n; i++)
  {
  if (!visited[i])
  {
    dfs (i, n, visited, adj matrix, t, &k);
  }
}
Print{ ("Topological order:");
  for (i=n-1; i>=0; i--)
  {
    Printf("%d", t[i]+1);
```

```
}
int main()
{
    int i, j, adjMatrix[10][10], n;
    Printf("Enter the no of nodes");
    Scanf("%d", &n);
    Printf("Enter the adjacency matrix");
    for(i=0; i<n; i++)
    {
        for(j=0; j<n; j++)
        {
            Scanf("%d", &adjMatrix[i][j]);
        }
    }
    dfs_logical_sort(n, adjMatrix);
    return 0;
}
```



AM

	1	2	3	4	5
1	0	0	1		0
2	0	0	1		0
3	0	0	0		1
4	0	0	0		1
5	0	0	0		0

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o/p

order the no of nodes - 5

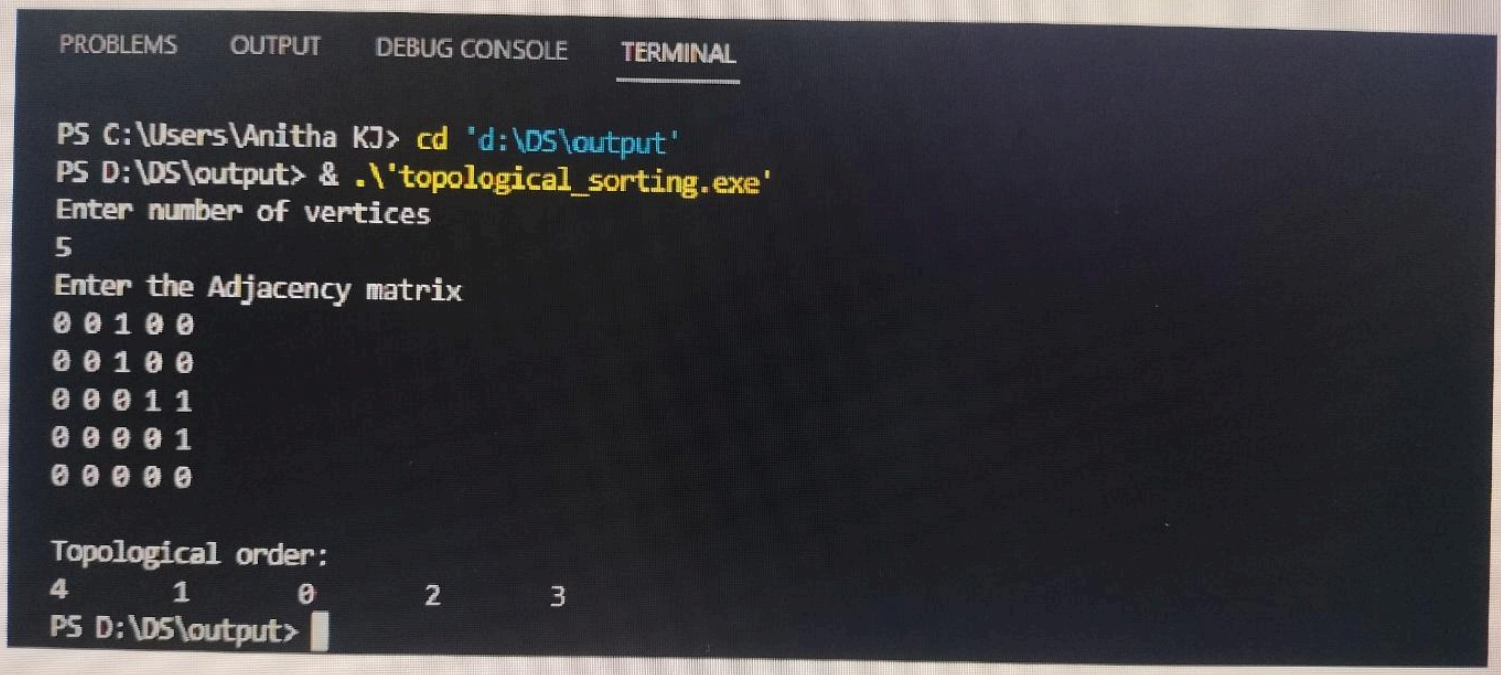
topological order : 2 1 3 4 5

Sol:

23/01/23

}

OUTPUT:



OBSERVATION: