//Write a program to traverse a graph using BFS method.

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#include <stdio.h>

int queue[50], front = -1, rear = -1;
int visited[50];
int graph[50][50];
int n;   // number of vertices

void bfs(int start)
{
    int i;
    queue[++rear] = start;
    visited[start] = 1;

    printf("BFS Traversal: ");

    while (front != rear)
    {
        start = queue[++front];
        printf("%d ", start);

        for (i = 0; i < n; i++)
        {
            if (graph[start][i] == 1 && visited[i] == 0)
            {
                queue[++rear] = i;
                visited[i] = 1;
```

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            }
        }
    }
}

int main()
{
    int i, j, start;

    printf("Enter number of vertices: ");
    scanf("%d", &n);

    printf("Enter adjacency matrix:\n");
    for (i = 0; i < n; i++)
    {
        for (j = 0; j < n; j++)
        {
            scanf("%d", &graph[i][j]);
        }
    }

    for (i = 0; i < n; i++)
        visited[i] = 0;

    printf("Enter starting vertex: ");
    scanf("%d", &start);

    bfs(start);
```

```
    return 0;
}
```

OUTPUT:-