Write a program to traverse a graph using BFS method.

```
#include <stdio.h>

#define MAX 10

int queue[MAX], front = -1, rear = -1;
int visited[MAX];

void enqueue(int v)
{
   if (front == -1)
      front = 0;
   queue[++rear] = v;
}

int dequeue()
{
   return queue[front++];
}

void bfs(int graph[MAX][MAX], int n, int start)
{
   int i, v;

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

   enqueue(start);
   visited[start] = 1;
```

```
    printf("BFS Traversal: ");

    while (front <= rear)
    {
        v = dequeue();
        printf("%d ", v);

        for (i = 0; i < n; i++)
        {
            if (graph[v][i] == 1 && visited[i] == 0)
            {
                enqueue(i);
                visited[i] = 1;
            }
        }
    }
}

int main()
{
    int graph[MAX][MAX], n, i, j, start;

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

    printf("Enter adjacency matrix row by row:\n");
    for (i = 0; i < n; i++)
    {
```

```
        printf("Row %d: ", i);
        for (j = 0; j < n; j++)
            scanf("%d", &graph[i][j]);
    }

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

    bfs(graph, n, start);

    return 0;
}
```

OUTPUT: