/*DEPTH FIRST SEARCH*/

```
#include<stdio.h>
void DFS(int);
int G[10][10],visited[10]={0},n;
void main()
{
   int i,j;
   printf("Enter number of vertices: ");
   scanf("%d",&n);
   printf("\nEnter adjacency matrix of Graph : ");
   for(i=0;i<n;i++)
   {
      for(j=0;j,n;j++)
      scanf("%d",&G[i][j]);
   }
   DFS(0);
}
void DFS(int i)
{
   int j;
   printf("\n%d",i);
   visited[i]=1;
   for(j=0;j<n;j++)
   if(!visited[j]&&G[i][j]==1)
   DFS(j);
}
```

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/*BREADTH FIRST SEARCH*/

```
#include<stdio.h>
int S[20][20],q[20]={0},n,visited[20]={0},i,j,f=0,r=-1;
void BFS(int v)
{
   for(i=0;i<n;i++)
   if(S[v][i]&&visited[i]==0)
   q[++r]=i;
   if(f<=r)
   {
      visited[q[f]]=1;
      BFS(q[f++]);
   }
}
```

```
void main()
{
   int v;
   printf("Enter number of vertices: ");
   scanf("%d",&n);
   printf("\nEnter Graph data in matrix form :\n ");
   for(i=0;i<n;i++)
   {
      for(j=0;j,n;j++)
      scanf("%d",&S[i][j]);
   }
   printf("\nEnter the start vertex: ");
   scanf("d",&v);
   BFS(v);
   printf("\nReachable nodes are : ");
   for(i=0;i<n;i++)
   {
      if(visited[i])
      printf("%d\t",i);
      else{
         printf("Unable to reach all nodes.BFS impossible");
         break;
      }
   }
}
```