LAB 4- BFS METHOD

Anitej Prasad

1BM19CS194

4-D

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


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

```
        for(i=1;i<=n;i++)
        {
         q[i]=0;
         visited[i]=0;
        }
        printf("\n Enter adjascency matrix :\n");
        for(i=1;i<=n;i++)
         for(j=1;j<=n;j++)
          scanf("%d",&a[i][j]);
        printf("\n Enter the starting vertex:");
        scanf("%d",&v);
        bfs(v);
        printf("\n The node which are reachable are:\n");
        for(i=1;i<=n;i++)
         if(visited[i])
          printf("%d\t",i);
        printf("\n");
}
```