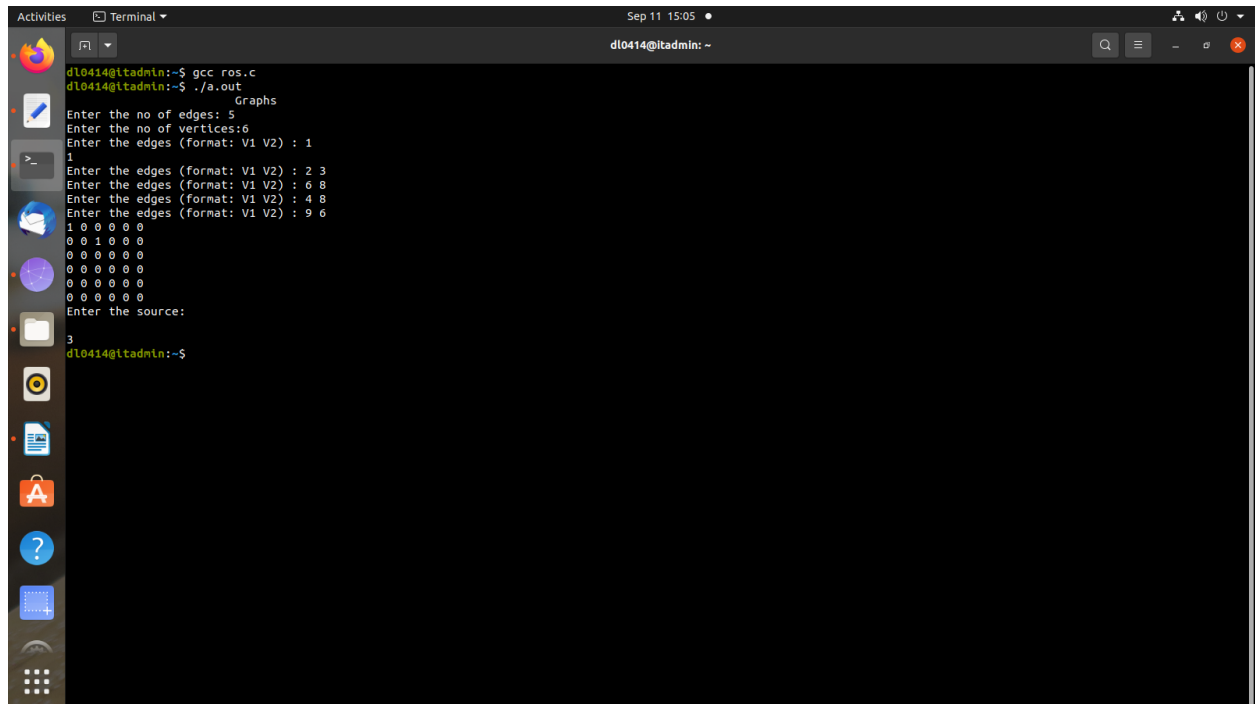


EXPERIMENT 7

```
#include <stdio.h>
#include <stdlib.h>
int source,V,E, time,visited [20], G[20][20];
void DFS(int i)
{
    int j;
    visited[i]=1;
    printf("%d->",i+1);
    for(j=0;j<V; j++)
    {
        if(G[i][j]==1&&visited[j]==0)
            DFS(j);
    }
}
int main()
{
    int i,j,v1,v2;
    printf("\t\t\tGraphs\n");
    printf("Enter the no of edges: ");
    scanf("%d", &E);
    printf("Enter the no of vertices:");
    scanf("%d", &V);
    for(i=0;i<V;i++)
    {
        for(j=0;j<V; j++) G[i][j]=0;
    }
    for(i=0;i<E;i++)
    {
        printf("Enter the edges (format: V1 V2) : ");
        scanf("%d %d",&v1,&v2);
        G[v1-1][v2-1]=1;
    }
    for(i=0;i<V;i++)
    {
        for(j=0;j<V; j++)
            printf("%d ",G[i][j]);
        printf("\n");
    }
    printf("Enter the source: ");
    scanf("%d", &source);
    DFS (source-1);
}
```

```
}  
    return 0;  
}
```



A terminal window titled "Terminal" with a dark background. The window shows the execution of a C program. The user enters the command `gcc ros.c` and then `./a.out`. The program prompts for the number of edges (5), the number of vertices (6), and then for edges in the format "V1 V2". The user enters the edges: 1, 2 3, 6 8, 4 8, and 9 6. The program then displays an adjacency list representation of the graph, showing vertices 1 through 6 and their connected neighbors. Finally, the program prompts for the source vertex, and the user enters 3.

```
d10414@itadmin:~$ gcc ros.c  
d10414@itadmin:~$ ./a.out  
Graphs  
Enter the no of edges: 5  
Enter the no of vertices: 6  
Enter the edges (format: V1 V2) : 1  
1  
Enter the edges (format: V1 V2) : 2 3  
Enter the edges (format: V1 V2) : 6 8  
Enter the edges (format: V1 V2) : 4 8  
Enter the edges (format: V1 V2) : 9 6  
1 0 0 0 0 0  
0 0 1 0 0 0  
0 0 0 0 0 0  
0 0 0 0 0 0  
0 0 0 0 0 0  
0 0 0 0 0 0  
0 0 0 0 0 0  
Enter the source:  
3  
d10414@itadmin:~$
```