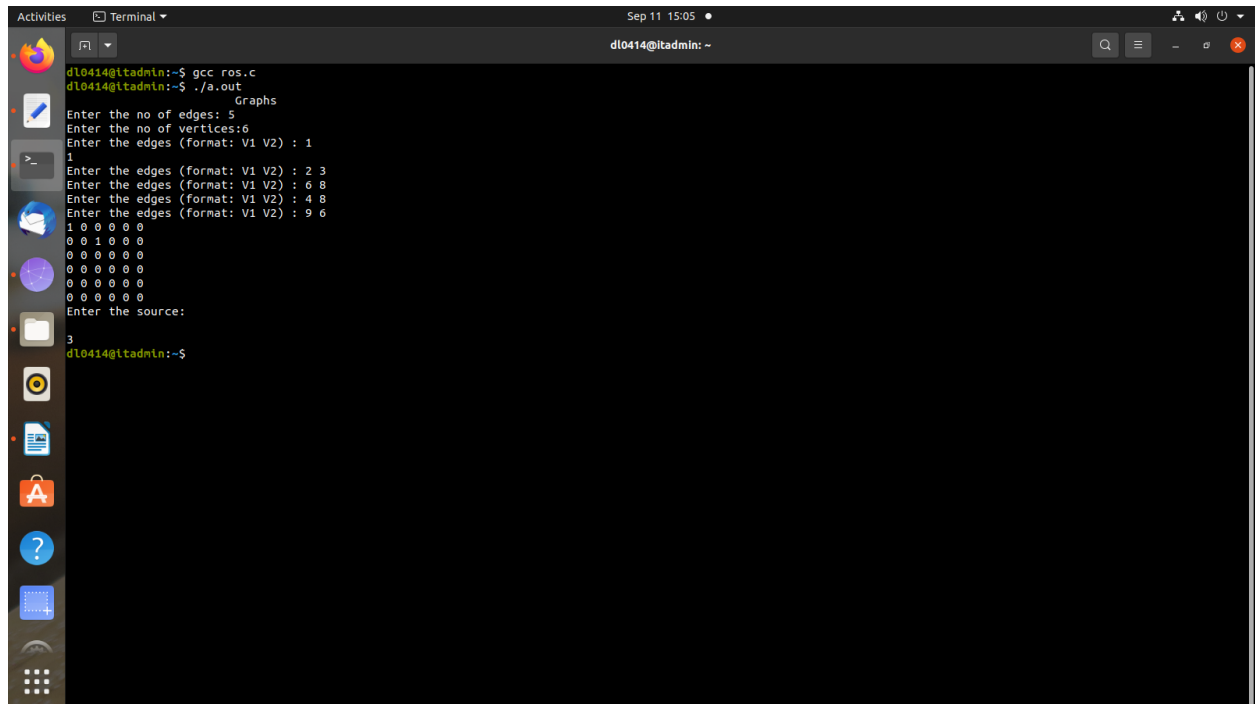


EXPERIMENT 7

```
#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" showing the execution of a C program. The user is logged in as "dl0414@ltadmin". 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 "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 user is prompted to enter the source vertex, and they enter "3".

```
dl0414@ltadmin:~$ gcc ros.c  
dl0414@ltadmin:~$ ./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  
dl0414@ltadmin:~$
```