

LAB-10

Prims.c

Code-

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
int a,b,u,v,n,i,j,ne=1;
```

```
int visited[10]={0},min,mincost=0,cost[10][10];
```

```
void main()
```

```
{
```

```
    printf("\nEnter the number of nodes:");
```

```
    scanf("%d",&n);
```

```
    printf("\nEnter the adjacency matrix:\n");
```

```
    for(i=1;i<=n;i++)
```

```
    for(j=1;j<=n;j++)
```

```
    {
```

```
        scanf("%d",&cost[i][j]);
```

```
        if(cost[i][j]==0)
```

```

        cost[i][j]=999;
    }
    visited[1]=1;
    printf("\n");
    while(ne < n)
    {
        for(i=1,min=999;i<=n;i++)
        for(j=1;j<=n;j++)
        if(cost[i][j]< min)
        if(visited[i]!=0)
        {
            min=cost[i][j];
            a=u=i;
            b=v=j;
        }
        if(visited[u]==0 || visited[v]==0)
        {
            printf("\n Edge %d:(%d %d)
cost:%d",ne++,a,b,min);

```

```
        mincost+=min;

        visited[b]=1;

    }

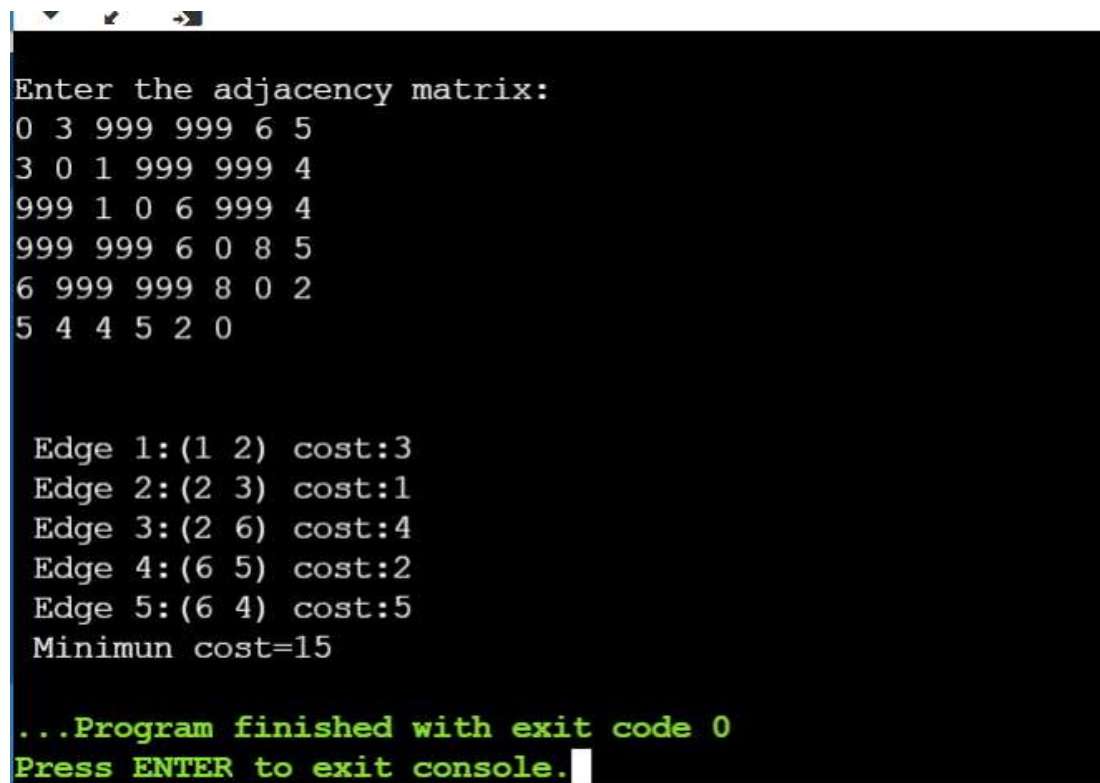
    cost[a][b]=cost[b][a]=999;

}

printf("\n Minimun cost=%d",mincost);

}
```

OUTPUT-



```
Enter the adjacency matrix:
0 3 999 999 6 5
3 0 1 999 999 4
999 1 0 6 999 4
999 999 6 0 8 5
6 999 999 8 0 2
5 4 4 5 2 0

Edge 1:(1 2) cost:3
Edge 2:(2 3) cost:1
Edge 3:(2 6) cost:4
Edge 4:(6 5) cost:2
Edge 5:(6 4) cost:5
Minimun cost=15

...Program finished with exit code 0
Press ENTER to exit console.
```