/*13. Write a program to find the minimum spanning tree of a given graph using Prim's algorithm */

```
#include<stdio.h>
int a,b,u,v,n,i,j,no_of_edges=1;
int visited[10],min,mincost=0,cost[10][10];
void main()
{
	printf("Enter the no of vertices");
	scanf("%d",&n);
	printf("\nEnter the Adjacency matrix:");
	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;
		}
	for(i=2;i<=n;i++)
		visited[i]=0;
	printf("\n The edges of spanning tree are:\n");
	visited[1]=1;
	while(no_of_edges<n)
	{
		for(i=1,min=999;i<=n;i++)
			for(j=1;j<=n;j++)
				if(cost[i][j]<min)
					if(visited[i]==0)
						continue;
					else
					{
						min=cost[i][j];
						a=u=i;
						b=v=j;
					}
				if(visited[u]==0||visited[v]==0)
				{

	printf("\n%d\tEdge\t(%d,%d)=%d",no_of_edges,a,b,min);
					mincost+=min;
					visited[b]=1;
					no_of_edges++;
				}
			cost[a][b]=cost[b][a]=999;
	}
	printf("\n\tMinimum Cost = %d\n",mincost);
	getch();
}
```

Output

```
Enter the no of vertices5

Enter the Adjacency matrix:999
11 9 7 8 11 999 15 14 13 9 15 999 12 14 7 14 12 999 6 8 13 14 6 999

 The edges of spanning tree are:

1       Edge    (1,4)=7
2       Edge    (4,5)=6
3       Edge    (1,3)=9
4       Edge    (1,2)=11
        Minimum Cost = 33
```