

### 34. Implementation of Minimum Spanning Tree using Prim's Algorithm.

```
#include <stdio.h>

int g[5][5]={0,2,0,6,0},{2,0,3,8,5},{0,3,0,0,7},{6,8,0,0,9},{0,5,7,9,0}};

int main() {

    int s[5]={0}, key[5], p[5], i, j, u;

    for(i=0;i<5;i++) key[i]=INF;

    key[0]=0;p[0]=-1;

    for(i=0;i<5-1;i++){

        int min=INF;

        for(j=0;j<5;j++)

            if(!s[j] && key[j]<min){min=key[j];u=j;}

        s[u]=1;

        for(j=0;j<5;j++)

            if(g[u][j] && !s[j] && g[u][j]<key[j]){p[j]=u; key[j]=g[u][j];}

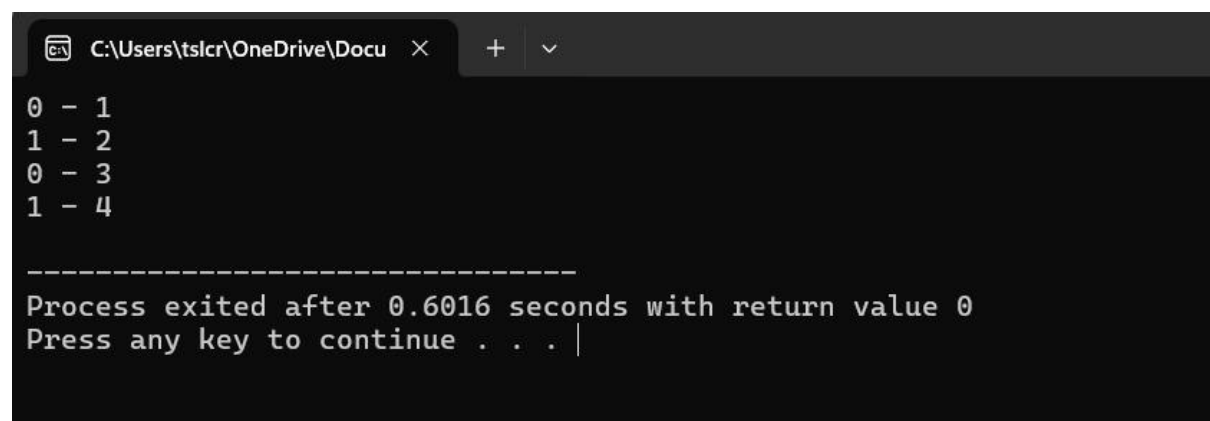
    }

    for(i=1;i<5;i++) printf("%d - %d\n", p[i], i);

    return 0;

}
```

### OUTPUT



```
C:\Users\tslcr\OneDrive\Docu  X  +  v

0 - 1
1 - 2
0 - 3
1 - 4

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Process exited after 0.6016 seconds with return value 0
Press any key to continue . . . |
```