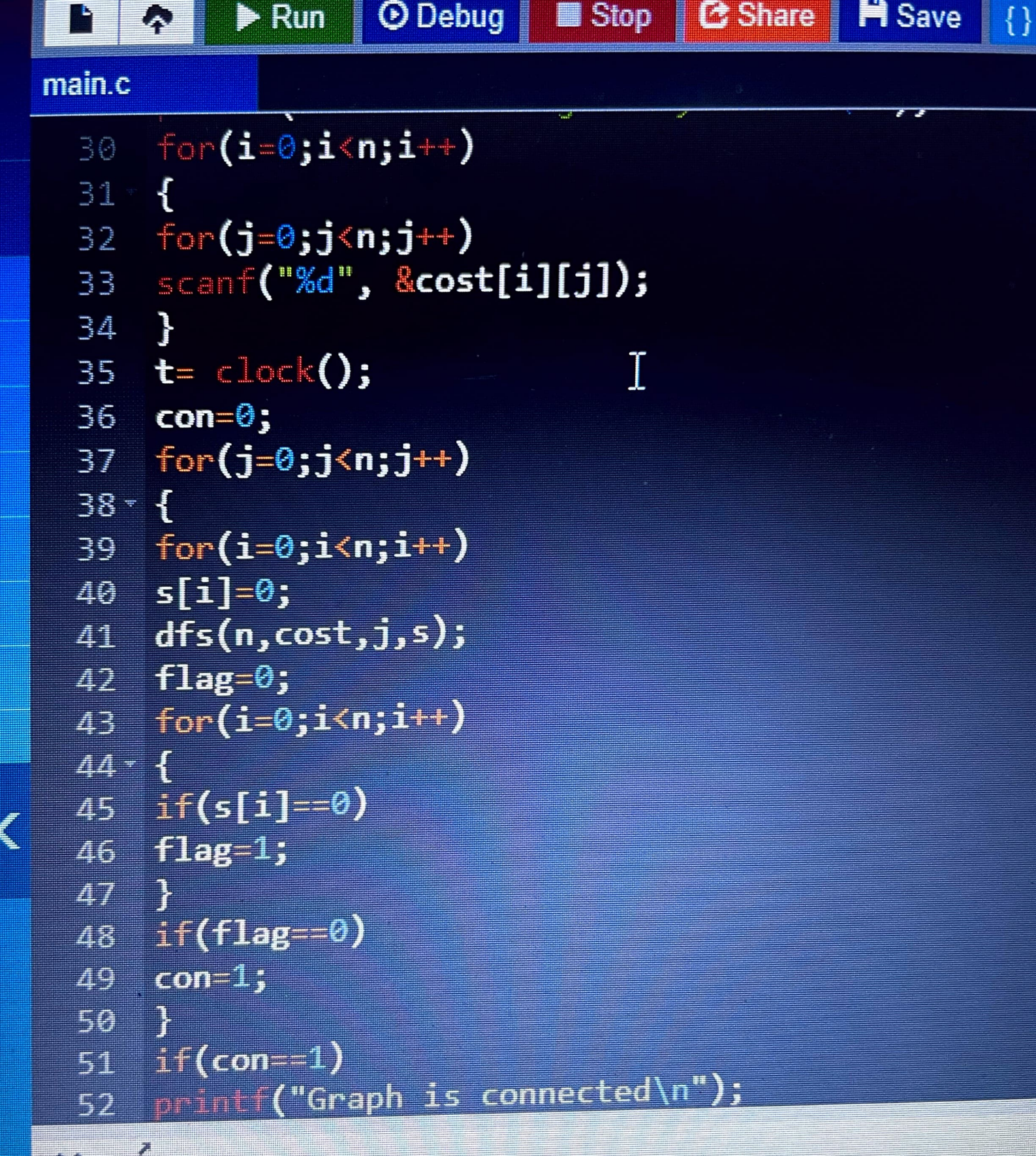
main.c

```c
#include<stdio.h>
#include<conio.h>
#include<time.h>
int a[1][10];
void dfs(int n, int cost[10][10], int u, int s[])
{
int v;
s[u]=1;
for(v=0;v<n;v++)
{
if((cost[u][v]==1)&&(s[v]==0))
dfs(n,cost,v,s);
}
}
void main()
{
    clock_t t;
int n,i,j,cost[10][10],s[10],con,flag;
printf("Enter the number of nodes\n");
scanf("%d", &n);
printf("Enter the adjacency matrix\n");
for(i=0;i<n;i++)
{
```

input


Run
Debug
Stop
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Save
main.c
for(i=0;i<n;i++)
{
for(j=0;j<n;j++)
scanf("%d", &cost[i][j]);
}
t= clock();
con=0;
for(j=0;j<n;j++)
{
for(i=0;i<n;i++)
s[i]=0;
dfs(n,cost,j,s);
flag=0;
for(i=0;i<n;i++)
{
if(s[i]==0)
flag=1;
}
if(flag==0)
con=1;
}
if(con==1)
printf("Graph is connected\n");

main.c

```
{
for(i=0;i<n;i++)
s[i]=0;
dfs(n,cost,j,s);
flag=0;
for(i=0;i<n;i++)
{
if(s[i]==0)
flag=1;
}
if(flag==0)
con=1;
}
if(con==1)
printf("Graph is connected\n");
else
printf("Graph is not connected\n");
t=clock()-t;
double time_taken = 1000000*((double)t)/CLOCKS_PER_SEC;
    printf("\nSorting took %f milliseconds to execute\n", time_taken);
getch();
}
```

```
Enter the number of nodes
3
Enter the adjacency matrix
0 1 1
1 0 1
1 1 0
Graph is connected

Sorting took 19.000000 milliseconds to execute


...Program finished with exit code 255
Press ENTER to exit console.
```

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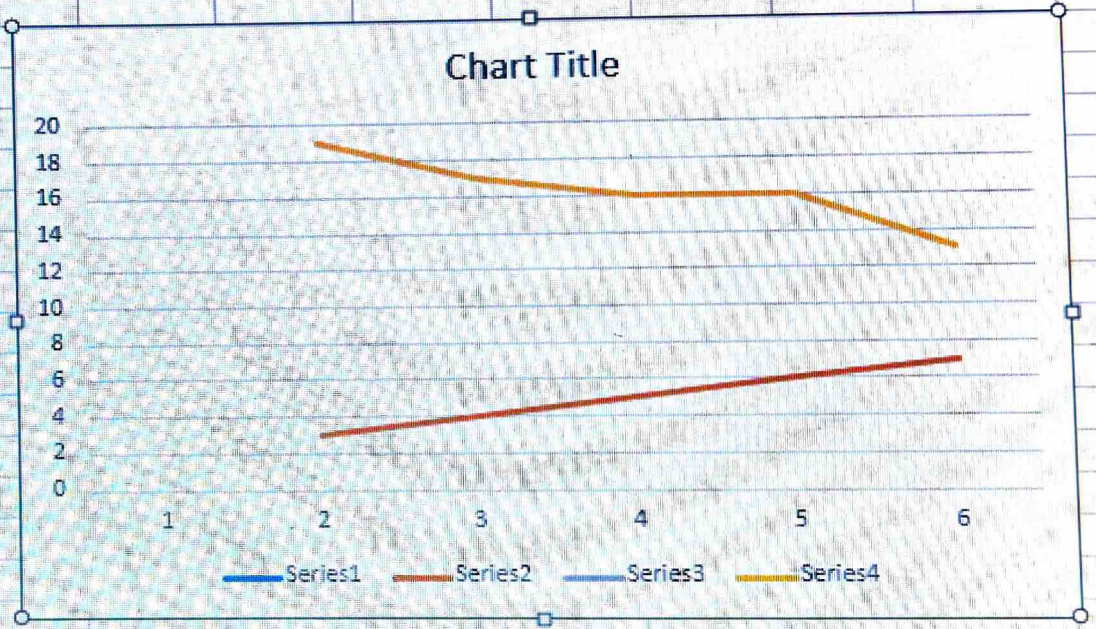
NO. OF NODES (NO.)	Sorting (milli sec)
3	19
4	17
5	16
6	16
7	13



Sheet1

Calculation Mode: Automatic Workbook Statistics

Average: 10.6 Count: 12 Sum: 106

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