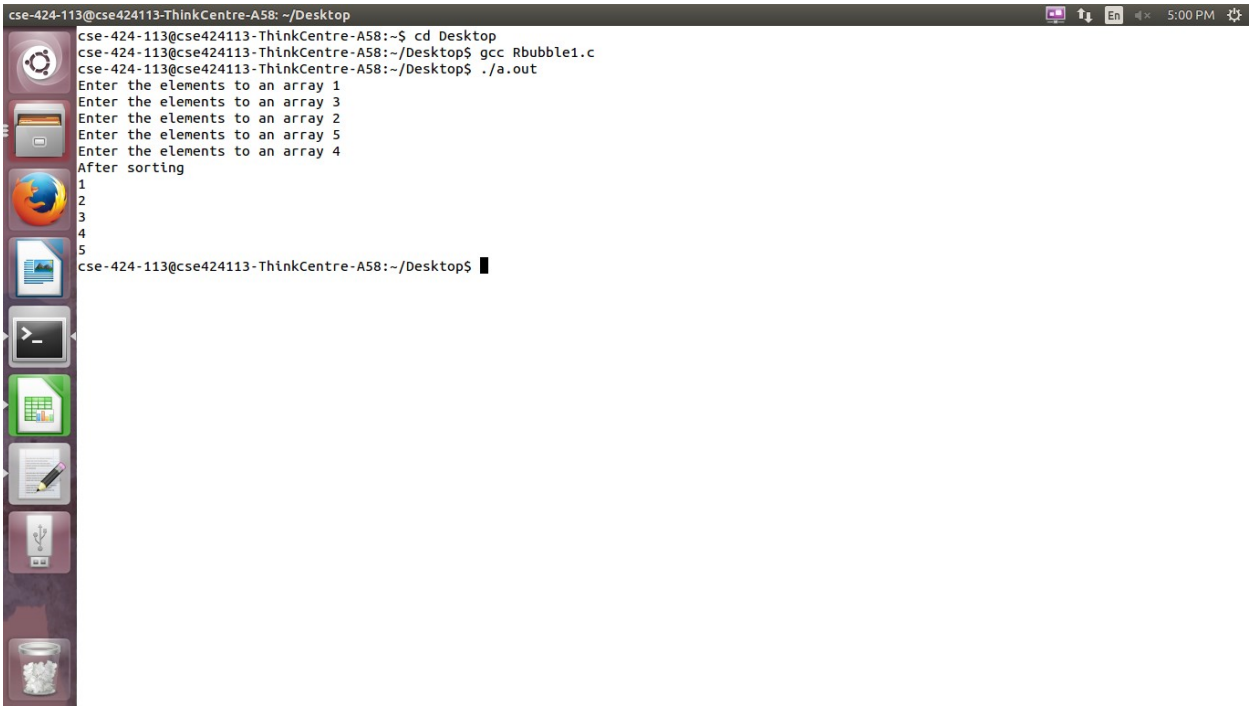
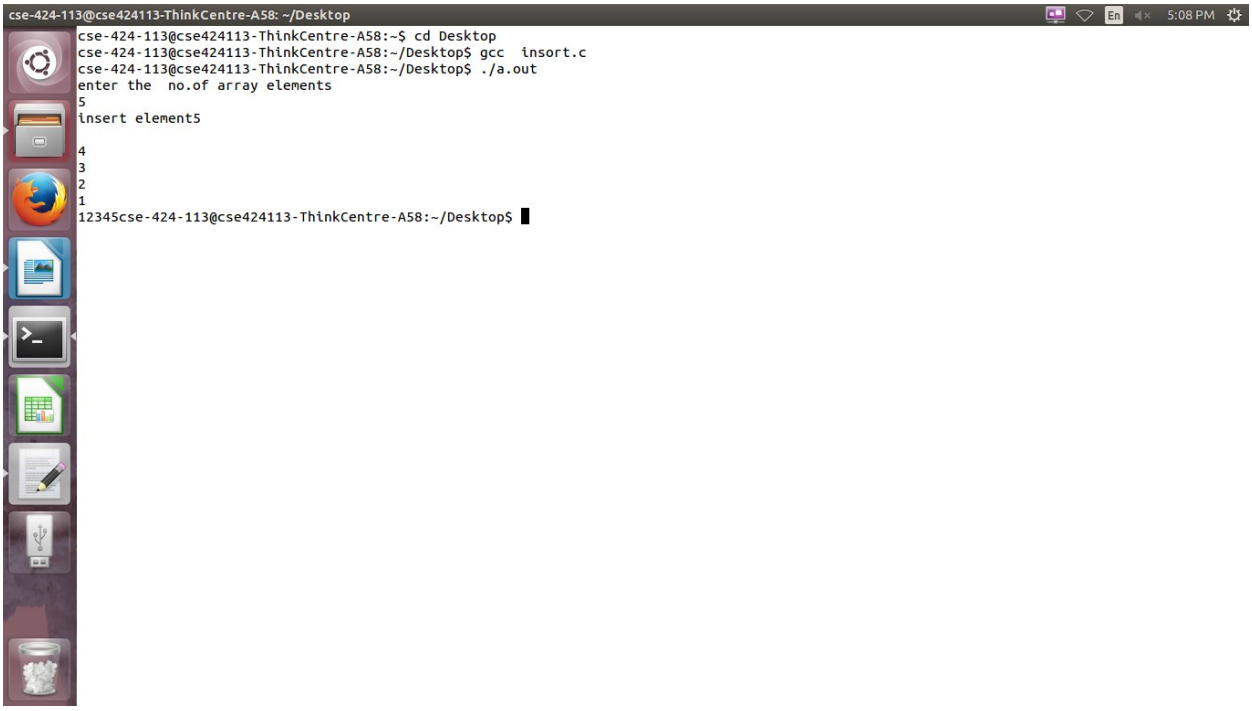
```
#include<stdio.h>
void main()
{
 int cho;
 int i=0,j=0,temp=0,n=5,loc,min;
  int arr[]={70,50,40,10,30};
  printf("\nOriginal Array :  ");
  for(i=0;i<5;i++)
  {
     printf("  %d  ",arr[i]);
  }
 printf("\nTypes Of Sorting :\n 1 - Bubble Sort \n 2 - Insertion Sort \n 3 - Selection Sort
\n");
 printf("Select any One : ");
 scanf("%d",&cho);
 switch(cho)
 {
  case 1 :
  {
  printf("\n---------------Bubble Sort--------------");
  for(i=0;i<5;i++)
  {
   for(j=0;j<5;j++)
   {
    if(arr[j]>arr[j+1])
    {
      temp=arr[j];
      arr[j]=arr[j+1];
      arr[j+1]=temp;
    }
   }
  }
  printf("\nSorted Array :  ");
  for(i=0;i<5;i++)
  {
     printf("  %d  ",arr[i]);
  }
  }
  break;
  case 2:
  {
    printf("\n---------------Insertion Sort--------------");
  for(i=1;i<=5;i++)
  {
   temp=arr[i];
   j=i-1;
```

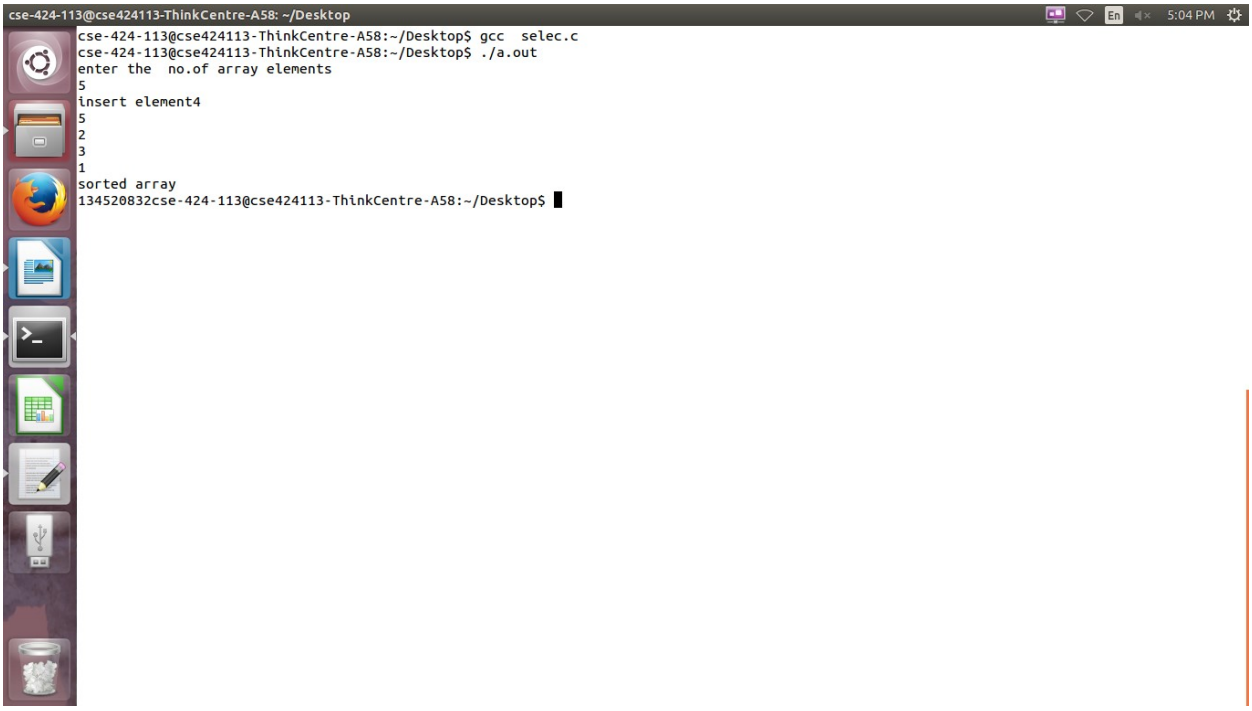
```
   while((temp<arr[j])&&(j>=0))
   {
     arr[j+1]=arr[j];
     j--;
   }
   arr[j+1]=temp;
  }
  printf("\nSorted Array :  ");
  for(i=0;i<5;i++)
  {
     printf("  %d  ",arr[i]);
  }
  }
  break;
  case 3:
  {
    printf("\n---------------Selection Sort--------------");
  for(i=0;i<n;i++)
 {
   min=arr[i];
   loc=i;
   for(j=i+1;j<=n;j++)
   {
     if(min>arr[j])
     {
       min=arr[j];
       loc=j;
     }
   }
   temp=arr[i];
   arr[i]=arr[loc];
   arr[loc]=temp;
 }
 printf("\nSorted Array :  ");
  for(i=0;i<5;i++)
  {
     printf("  %d  ",arr[i]);
  }
  }
  break;
 }
}
```


cse-424-113@cse424113-ThinkCentre-A58: ~/Desktop
5:00 PM
cse-424-113@cse424113-ThinkCentre-A58:~$ cd Desktop
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$ gcc Rbubble1.c
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$ ./a.out
Enter the elements to an array 1
Enter the elements to an array 3
Enter the elements to an array 2
Enter the elements to an array 5
Enter the elements to an array 4
After sorting
1
2
3
4
5
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$

```
#include<stdio.h>
void main()
{
int i,j,n,temp;
int a[15];
printf("enter the  no.of array elements");
scanf("%d",&n);
printf("insert element");
for(i=0;i<n;i++)
{
scanf("%d",&a[i]);
}
for(i=1;i<n;i++)
{
temp=a[i];
j=i-1;
while(temp<a[j]&& (j>=0))
{
a[j+1]=a[j];
j--;
}
a[j+1]=temp;
}
for(i=0;i<n;i++)
{
printf("%d",a[i]);
}
}
```

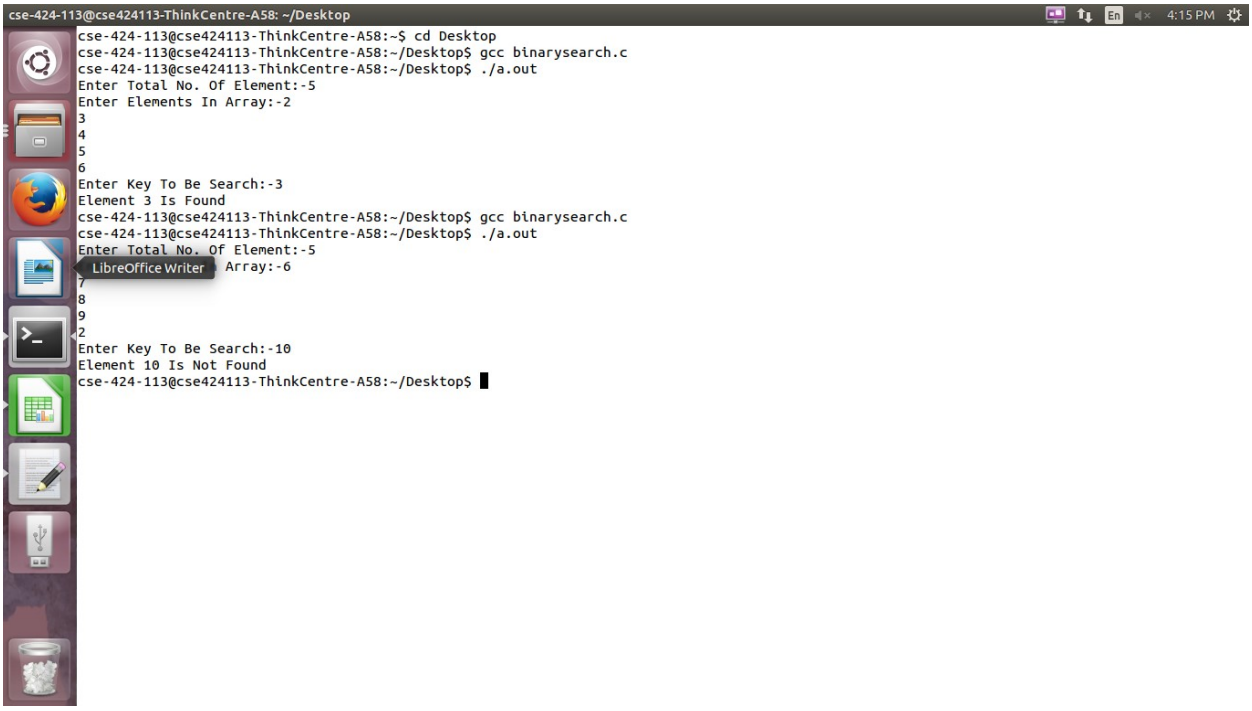

cse-424-113@cse424113-ThinkCentre-A58: ~/Desktop
5:08 PM
cse-424-113@cse424113-ThinkCentre-A58:~$ cd Desktop
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$ gcc insort.c
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$ ./a.out
enter the no.of array elements
5
insert element5
4
3
2
1
12345cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$

```
#include<stdio.h>
void main()
{
int i=0,j,min,n,loc,temp;
int a[15];
printf("enter the  no.of array elements");
scanf("%d",&n);
printf("insert element");
for(i=0;i<n;i++)
{
scanf("%d",&a[i]);
}
for(i=0;i<n;i++)
{
min=a[i];
loc=i;
for(j=i+1;j<n;j++)
{
if(min>a[j])
{
min=a[j];
loc=j;
}
}
temp=a[i];
a[i]=a[loc];
a[loc]=temp;
}
printf("sorted array\n");
for(i=0;i<n;i++);
{
printf("%d",a[i]);
}
}
```


cse-424-113@cse424113-ThinkCentre-A58: ~/Desktop
En
5:04 PM
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$ gcc selec.c
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$ ./a.out
enter the no.of array elements
5
insert element4
5
2
3
1
sorted array
134520832cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$

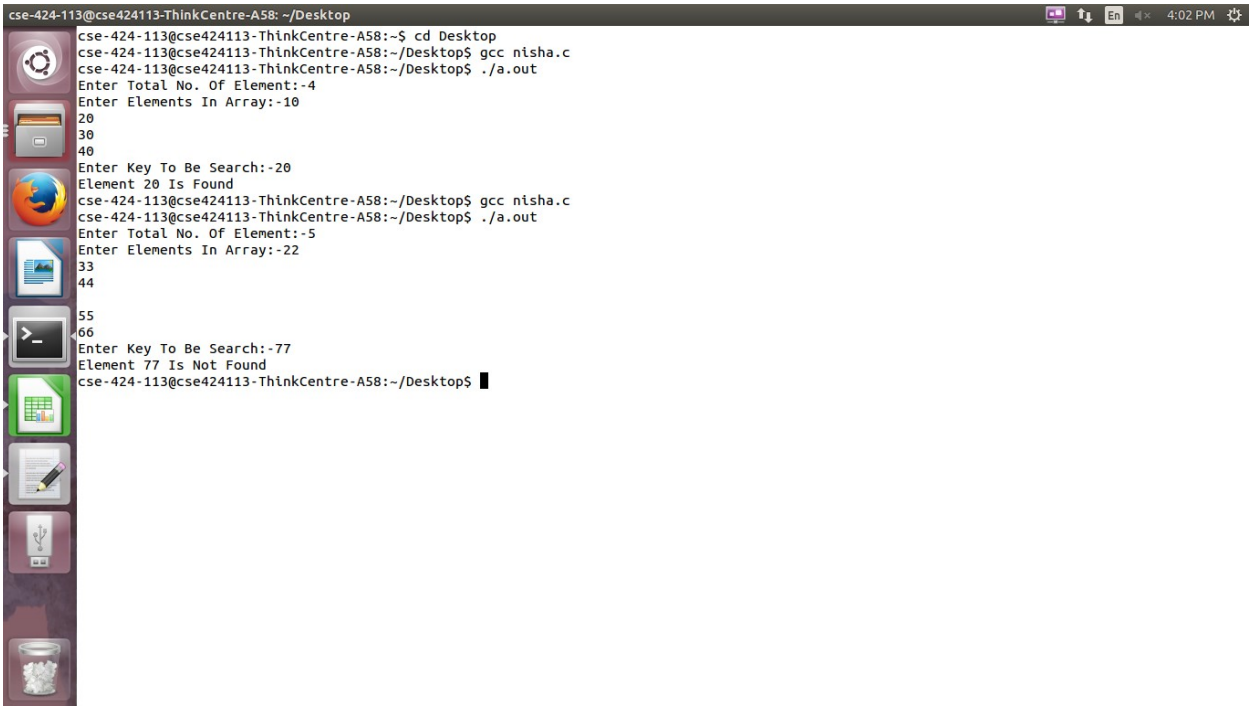
```
#include<stdio.h>



void main()
{
	int first=0,last=0,mid,a[10],key, i,n,flag=0,temp,j;
	printf("Enter Total No. Of Element:-");
	    scanf("%d",&n);
	    printf("Enter Elements In Array:-");
	    for(i=0;i<n;i++)
	    {
	                scanf("%d",&a[i]);
	    }
	    printf("Enter Key To Be Search:-");
	    scanf("%d",&key);
	    for(i=0;i<n;i++)
	                        {
	                                    for(j=i+1;j<n;j++)
	                                    {
	                                                if(a[i]>a[j])
	                                                {
	                                                            temp=a[i];
	                                                            a[i]=a[j];
	                                                            a[j]=temp;
	                                                }
```

```
        }
}
first=0;
last=n;
while(first<=last)
{
        mid=(first+last)/2;
        if(a[mid]==key)
        {
                printf("Element %d Is Found\n",key);
                flag=1;
                break;
        }
        else
        {
                if(key<a[mid])
                        last=mid-1;
                if(key>a[mid])
                        first=mid+1;
        }
}
if(flag==0)
{
        printf("Element %d Is Not Found\n",key);
}
```


cse-424-113@cse424113-ThinkCentre-A58: ~/Desktop
4:15 PM
cse-424-113@cse424113-ThinkCentre-A58:~$ cd Desktop
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$ gcc binarysearch.c
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$ ./a.out
Enter Total No. Of Element:-5
Enter Elements In Array:-2
3
4
5
6
Enter Key To Be Search:-3
Element 3 Is Found
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$ gcc binarysearch.c
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$ ./a.out
Enter Total No. Of Element:-5
LibreOffice Writer
Array:-6
7
8
9
2
Enter Key To Be Search:-10
Element 10 Is Not Found
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$

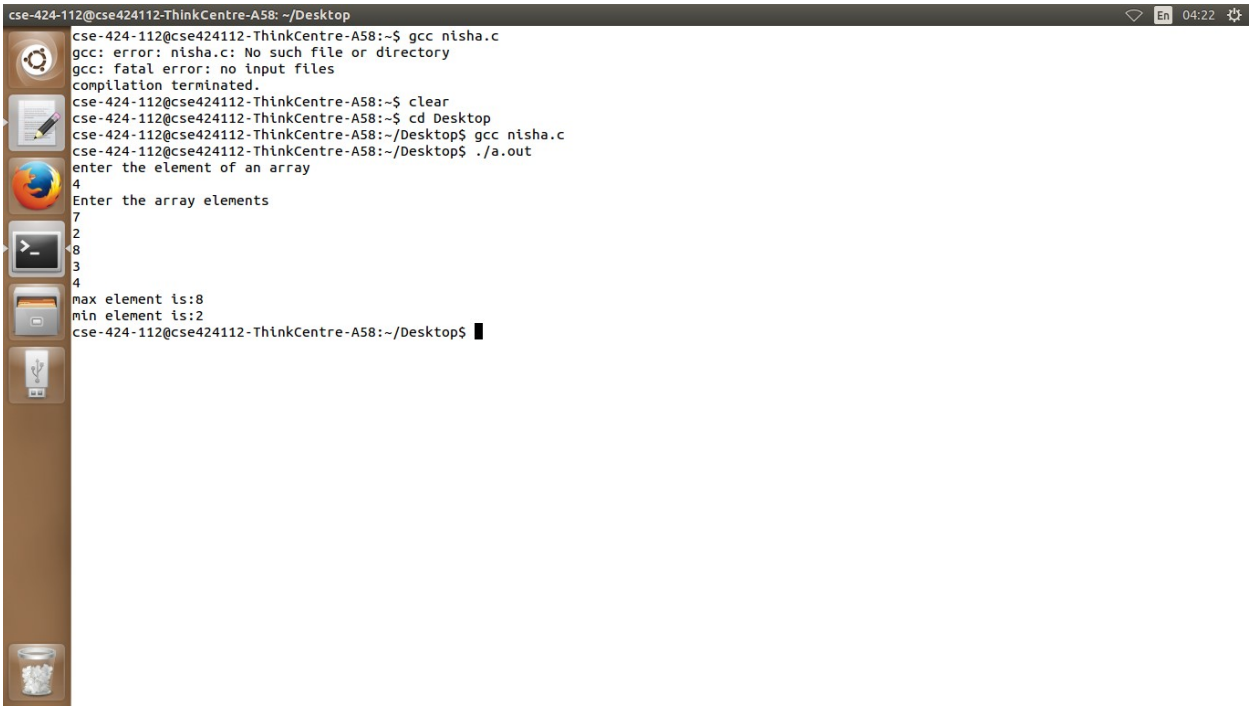
```
#include<stdio.h>
void main()
{	int a[10];
	int key;
	int i,n,flag=0,j,ch;
	printf("Enter Total No. Of Element:-");
	scanf("%d",&n);
	printf("Enter Elements In Array:-");
	for(i=0;i<n;i++)
	{
		scanf("%d",&a[i]);
	}
	printf("Enter Key To Be Search:-");
	scanf("%d",&key);
	for(i=0;i<n;i++)
			{
				if(key==a[i])
				{
					printf("Element %d Is Found\n",key);
					flag=1;
					break;
				}
			}
			if(flag==0)
			{
```

```
printf("Element %d Is Not Found\n",key);

}

}
```


cse-424-113@cse424113-ThinkCentre-A58: ~/Desktop
4:02 PM
cse-424-113@cse424113-ThinkCentre-A58:~$ cd Desktop
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$ gcc nisha.c
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$ ./a.out
Enter Total No. Of Element:-4
Enter Elements In Array:-10
20
30
40
Enter Key To Be Search:-20
Element 20 Is Found
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$ gcc nisha.c
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$ ./a.out
Enter Total No. Of Element:-5
Enter Elements In Array:-22
33
44
55
66
Enter Key To Be Search:-77
Element 77 Is Not Found
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$

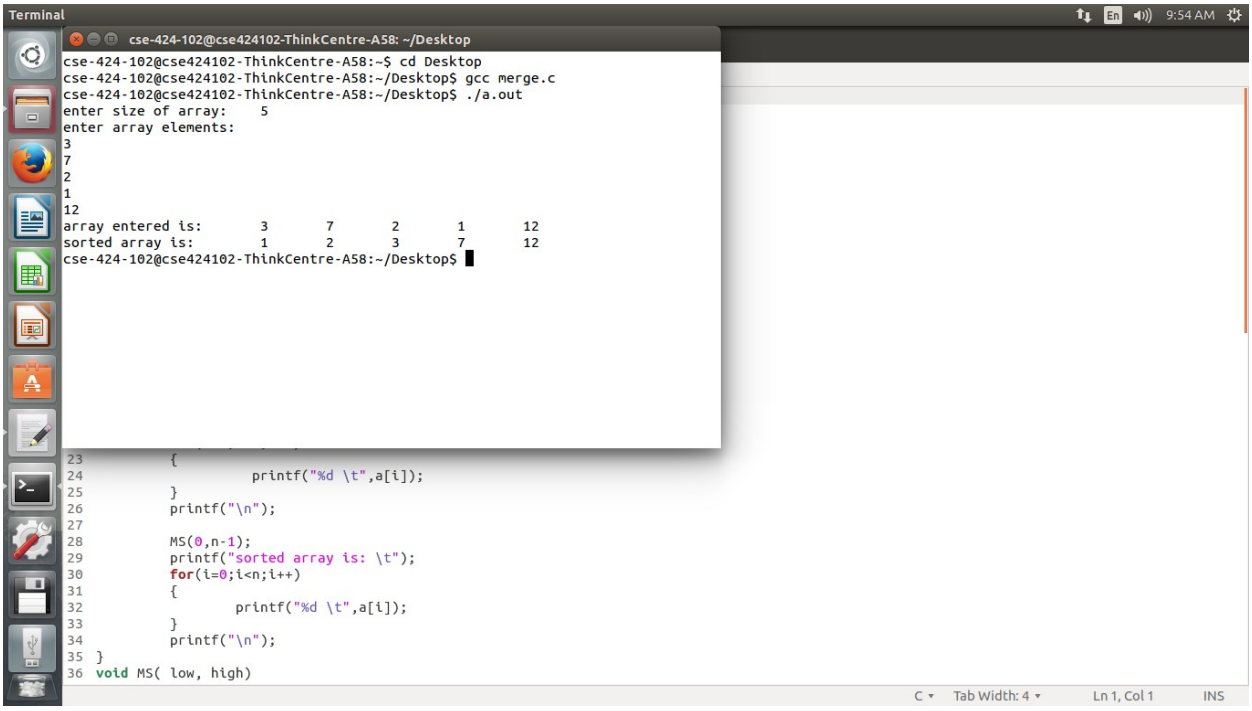
```
#include<stdio.h>
 void minmax(int i,int j);
 int i,j,a[7],n,max,min,m,x;


void main()

{
printf("enter the element of an array \n");
scanf("%d",&n);
printf("Enter the array elements\n");
for(i=0;i<=n;i++)
 {
   scanf("%d",&a[i]);
 }
 max=a[1];
 min=a[1];
 minmax(1,n);
 printf("max element is:%d\n",max);
printf("min element is:%d\n",min);


 }
 void minmax(int i,int j)
 {
 int max1,min1,mid;
 if(i==j)
 {
  max=min=a[i];
  }
 else if(i==j-1)
 {
  if(a[i]<a[j])
   {
    max=a[j];
    min=a[i];
   }
  else
   {
    max=a[i];
    min=a[j];
   }
  }
 else
  {
   mid=(i+j)/2;
   minmax(i,mid);
```

```
    max1=max;
    min1=min;
    minmax(mid+1,j);
    if(max<max1)
    {
     max=max1;
    }
    if(min>min1)
    {
     min=min1;
    }
}
}
```

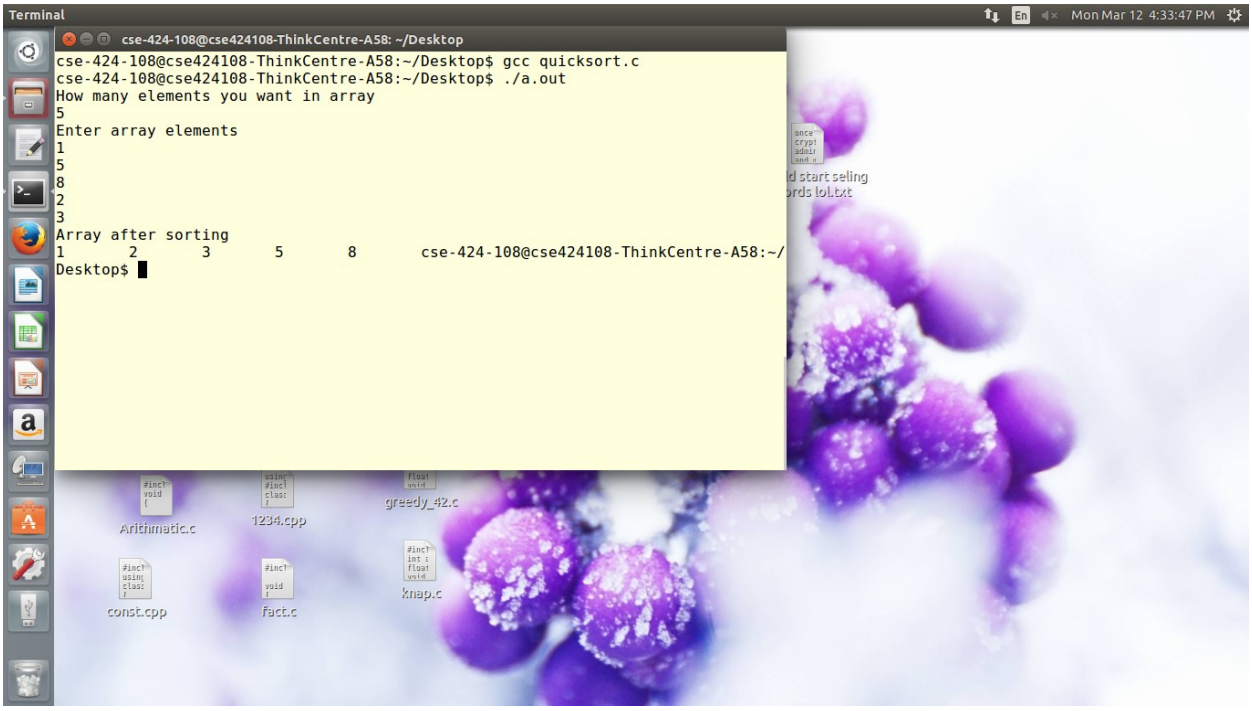

cse-424-112@cse424112-ThinkCentre-A58: ~/Desktop
En
04:22
cse-424-112@cse424112-ThinkCentre-A58:~$ gcc nisha.c
gcc: error: nisha.c: No such file or directory
gcc: fatal error: no input files
compilation terminated.
cse-424-112@cse424112-ThinkCentre-A58:~$ clear
cse-424-112@cse424112-ThinkCentre-A58:~$ cd Desktop
cse-424-112@cse424112-ThinkCentre-A58:~/Desktop$ gcc nisha.c
cse-424-112@cse424112-ThinkCentre-A58:~/Desktop$ ./a.out
enter the element of an array
4
Enter the array elements
7
2
8
3
4
max element is:8
min element is:2
cse-424-112@cse424112-ThinkCentre-A58:~/Desktop$

```c
#include<stdio.h>
       int a[10]; int temp[10];
       // int i,j,k,h,n;
       void MS(int low,int high);
       void merge(int low,int mid,int high);
void  main()
{

//         int low=0,mid,high
           int i ,n;
           printf("enter size of array: \t");
           scanf("%d",&n);
  //       high=n-1;

           printf("enter array elements: \n");
           for(i=0;i<n;i++)
           {
             scanf("%d",&a[i]);
           }

           printf("array entered is: \t");
           for(i=0;i<n;i++)
           {
                     printf("%d \t",a[i]);
           }
           printf("\n");

           MS(0,n-1);
           printf("sorted array is: \t");
           for(i=0;i<n;i++)
           {
                   printf("%d \t",a[i]);
           }
           printf("\n");
 }
 void MS( low, high)
 {
            int mid;
            if(low<high)
            {
                     mid=(low+high)/2;
                     MS(low,mid);
                     MS(mid+1,high);
                     merge(low,mid,high);
            }
 }

 void merge(low,mid,high)
 {
    int h,i,j,k;
    h=low; i=low; j=mid+1;
    while(h<=mid && j<=high)
    {
         if(a[h] <= a[j])
        {
                 temp[i]=a[h];
                 h++;
        }
```

```
      else
      {
               temp[i]=a[j];
               j++;
      }
      i++;
  }
 if(h>mid)
{
      for(k=j;k<=high;k++)
       {
             temp[i]=a[k];
              i++;
      }
}
else
{
    for(k=h;k<=mid;k++)
    {
              temp[i]=a[k];
              i++;
    }
}
for(k=low;k<=high;k++)
{
    a[k]=temp[k];
 }
}
```

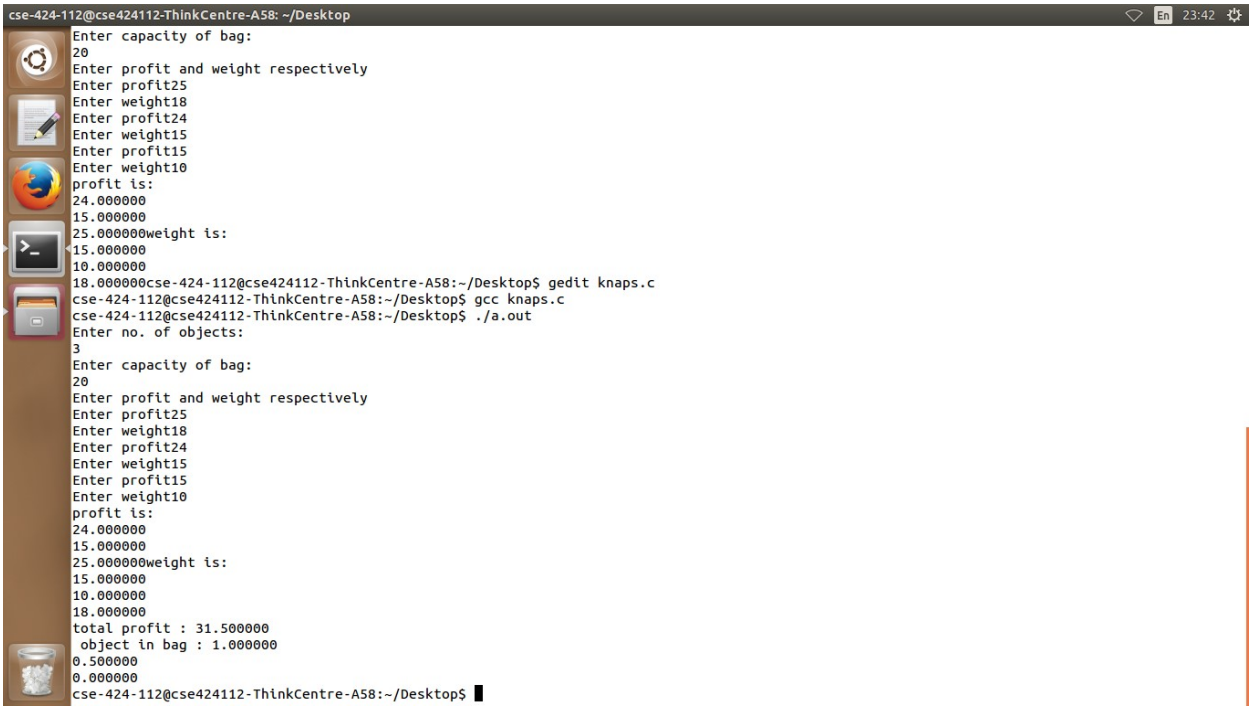

Terminal
9:54 AM
cse-424-102@cse424102-ThinkCentre-A58: ~/Desktop
cse-424-102@cse424102-ThinkCentre-A58:~$ cd Desktop
cse-424-102@cse424102-ThinkCentre-A58:~/Desktop$ gcc merge.c
cse-424-102@cse424102-ThinkCentre-A58:~/Desktop$ ./a.out
enter size of array: 5
enter array elements:
3
7
2
1
12
array entered is: 3 7 2 1 12
sorted array is: 1 2 3 7 12
cse-424-102@cse424102-ThinkCentre-A58:~/Desktop$
{
printf("%d \t",a[i]);
}
printf("\n");
MS(0,n-1);
printf("sorted array is: \t");
for(i=0;i<n;i++)
{
printf("%d \t",a[i]);
}
printf("\n");
}
void MS(low, high)
C
Tab Width: 4
Ln 1, Col 1
INS

```c
#include<stdio.h>
int a[50];
int quickSort(int a[],int p, int q)
        {
                if(p<q)
                 {
                        int j=partition(a,p,q);
                        quickSort(a,p,j-1);
                        quickSort(a,j+1,q);
                        return a[j];
                 }
       }
int partition(int r[],int m,int n)
         {
            int x=r[m];
            int i=m;
            int temp,tem,j;
            for(j=m+1;j<=n;j++)
                {
                        if(r[j]<=x)
                                {
                                        i=i+1;
                                        temp=r[i];
                                        r[i]=r[j];
                                        r[j]=temp;
                                }
                }
            tem=r[m];
            r[m]=r[i];
            r[i]=tem;
            return i;
        }
void main()
         {
                int i,n;
                printf("How many elements you want in array\n");
                scanf("%d",&n);
                printf("Enter array elements\n");
                for(i=0;i<n;i++)
                   {
                      scanf("%d",&a[i]);
                   }
                 quickSort(a,0,n-1);
                 printf("Array after sorting\n");
                 for(i=0;i<n;i++)
                 {
                    printf("%d\t",a[i]);
                 }
         }
```


Terminal
Mon Mar 12 4:33:47 PM
cse-424-108@cse424108-ThinkCentre-A58: ~/Desktop
cse-424-108@cse424108-ThinkCentre-A58:~/Desktop$ gcc quicksort.c
cse-424-108@cse424108-ThinkCentre-A58:~/Desktop$ ./a.out
How many elements you want in array
5
Enter array elements
1
5
8
2
3
Array after sorting
1 2 3 5 8 cse-424-108@cse424108-ThinkCentre-A58:~/
Desktop$
Arithmatic.c
1234.cpp
greedy_42.c
const.cpp
fact.c
knap.c

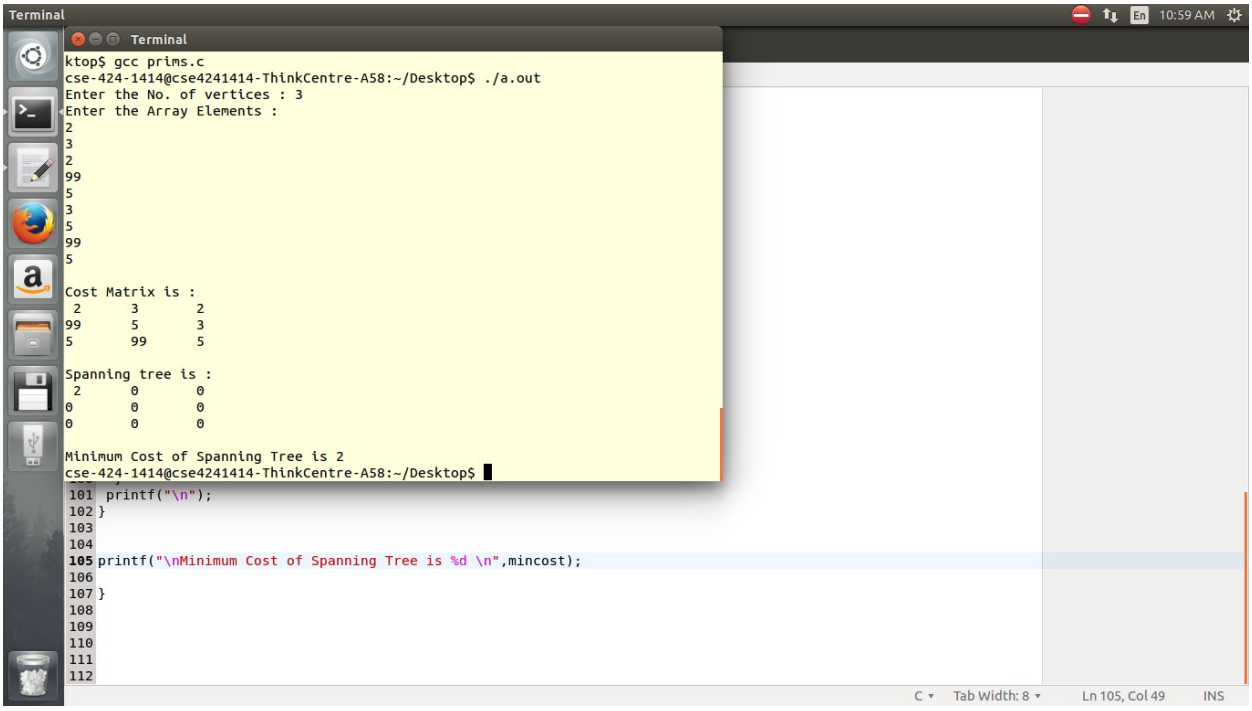
```
#include<stdio.h>
float p[5],w[5],x[5],y[5],capacity=0.0,profit=0.0;
int i=0,j=0,n=3;
void main()
{
	printf("Enter profit and weight respectively\n");
	for(i=0;i<6;i++)
	{
		printf("Enter profit");
		scanf("%f", &p[i]);
		printf("Enter weight");
		scanf("%f", &w[i]);
	}
	printf("Enter capacity\n");
	scanf("%f",&capacity);
	for(i=0;i<6;i++)
	{
		y[i]=p[i]/w[i];
	}
	for(i=0;i<6;i++)
	{
		x[i]=y[i];
	}
	for(i=0;i<6;i++)
	{
		for(j=i+1;j<6;j++)
		{
			if(y[i]>y[j])
			{
				int t;
				t=y[i];
				y[i]=y[j];
				y[j]=t;
			}
		}
	}
	while(capacity>0)
	{
		int k,m=0;
		float part=0.0,pp=0.0;
		for(k=0;k<6;k++)
		{
			if(y[m]==x[k])
			{
				if(capacity>=w[k])
				{
```

```
                                        capacity=capacity-w[k];
                                        profit=profit+p[k];
                                }
                                else
                                {
                                        part=capacity/w[k];
                                        pp=p[k]*part;
                                        profit=profit+pp;
                                }
                        }
                        m++;
                }
        }
        printf("Profit: %f \n" ,profit);
}
```


cse-424-112@cse424112-ThinkCentre-A58: ~/Desktop
En
23:42
Enter capacity of bag:
20
Enter profit and weight respectively
Enter profit25
Enter weight18
Enter profit24
Enter weight15
Enter profit15
Enter weight10
profit is:
24.000000
15.000000
25.000000weight is:
15.000000
10.000000
18.000000cse-424-112@cse424112-ThinkCentre-A58:~/Desktop$ gedit knaps.c
cse-424-112@cse424112-ThinkCentre-A58:~/Desktop$ gcc knaps.c
cse-424-112@cse424112-ThinkCentre-A58:~/Desktop$ ./a.out
Enter no. of objects:
3
Enter capacity of bag:
20
Enter profit and weight respectively
Enter profit25
Enter weight18
Enter profit24
Enter weight15
Enter profit15
Enter weight10
profit is:
24.000000
15.000000
25.000000weight is:
15.000000
10.000000
18.000000
total profit : 31.500000
object in bag : 1.000000
0.500000
0.000000
cse-424-112@cse424112-ThinkCentre-A58:~/Desktop$

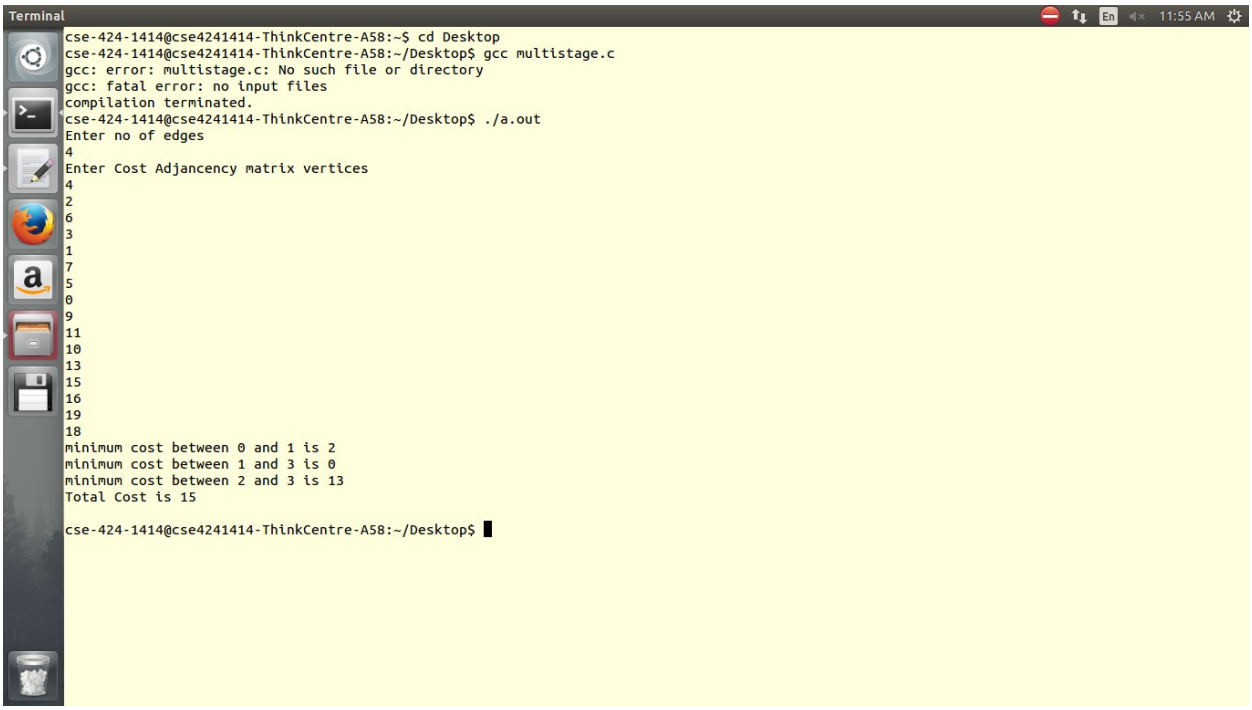
```c
#include<stdio.h>
int c[10][10];
int n,i,j,t,k,l;
 int near[10],tree[10][3];
 int mincost,p,temp,x;


void main()
{


 printf("Enter the No. of vertices : ");
 scanf("%d",&n);

 printf("Enter the Array Elements : ");
 for(i=1;i<=n;i++)
{
 for(j=1;j<=n;j++)
  {
    scanf("%d",&c[i][j]);
  }
}

 printf("\nCost Matrix is :\n ");
 for(i=1;i<=n;i++)
{
 for(j=1;j<=n;j++)
  {
    printf("%d\t",c[i][j]);
  }
 printf("\n");
}

t=c[1][1];


 for(i=1;i<=n;i++)
{
 for(j=1;j<=n;j++)
  {
     if(t > c[i][j])
   {
         t=c[i][j];
         k=i;
         l=j;
    }
  }
}

mincost = t;
tree[1][1] = k;
tree[1][2] = l;
tree[1][3] = t;

for(p=1;p<=n;p++)
{
  if(c[p][l] < c[p][k])
     near[p] = l;
```

```
  else
     near[p] = k;
}

near[k]=near[l]=100;
temp=99;


 for(i=2;i<=n;i++)
{
 for(j=1;j<=n;j++)
  {
    if(near[j] != 100 && c[j][near[j]] < temp)
     {
        temp=c[j] [near[j]];
        x=j;
     }
  }

  tree[1][1]=x;
  tree[1][2]=near[x];
  tree[1][3] = c[x] [near[x]];
  mincost = mincost + c[x] [near[x]];
  near[x]=100;

  for(j=1;j<=n;j++)
  {
     if(near[j] != 100 && near[j] > c[i][j])
        near[j]=x;
  }

  temp=99;

}

 printf("\nSpanning tree is :\n ");
 for(i=1;i<=n;i++)
{
 for(j=1;j<=3;j++)
  {
    printf("%d\t",tree[i][j]);
  }
 printf("\n");
}


printf("\nMinimum Cost of Spanning Tree is %d \n",mincost);

}
```

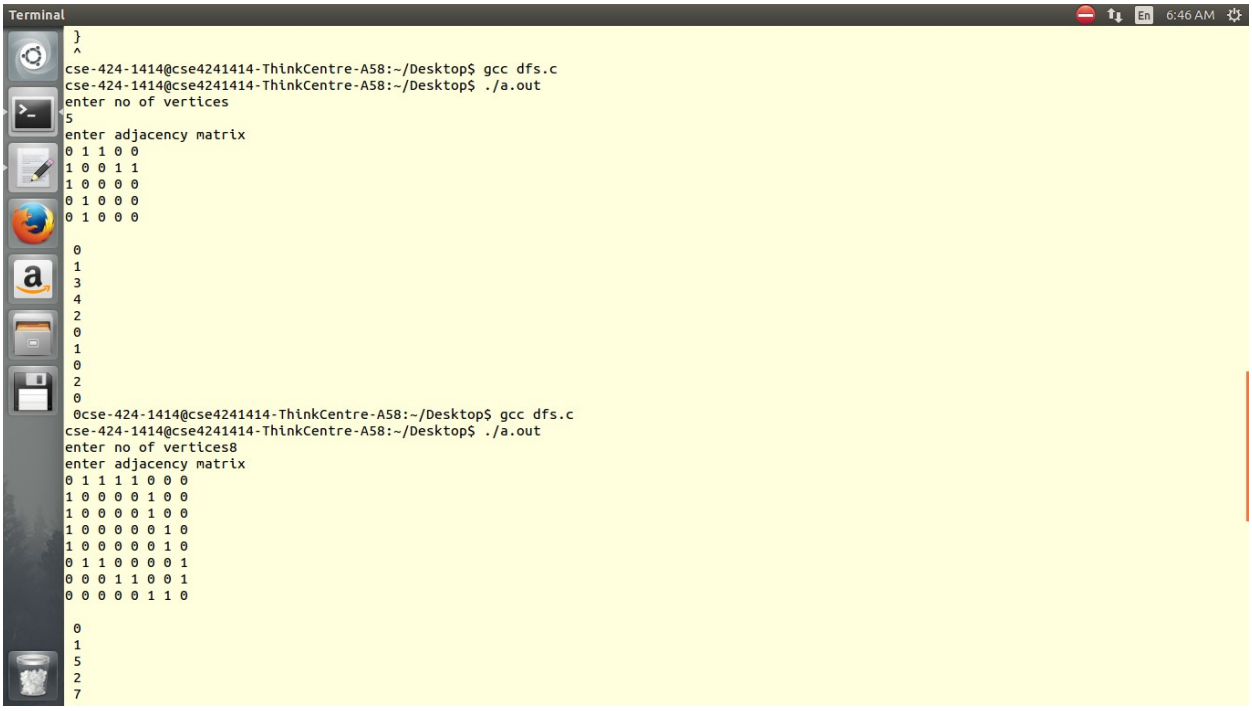

Terminal
10:59 AM
Terminal
ktop$ gcc prims.c
cse-424-1414@cse4241414-ThinkCentre-A58:~/Desktop$ ./a.out
Enter the No. of vertices : 3
Enter the Array Elements :
2
3
2
99
5
3
5
99
5
Cost Matrix is :
2 3 2
99 5 3
5 99 5
Spanning tree is :
2 0 0
0 0 0
0 0 0
Minimum Cost of Spanning Tree is 2
cse-424-1414@cse4241414-ThinkCentre-A58:~/Desktop$
printf("\n");
}
printf("\nMinimum Cost of Spanning Tree is %d \n",mincost);
}
C
Tab Width: 8
Ln 105, Col 49
INS

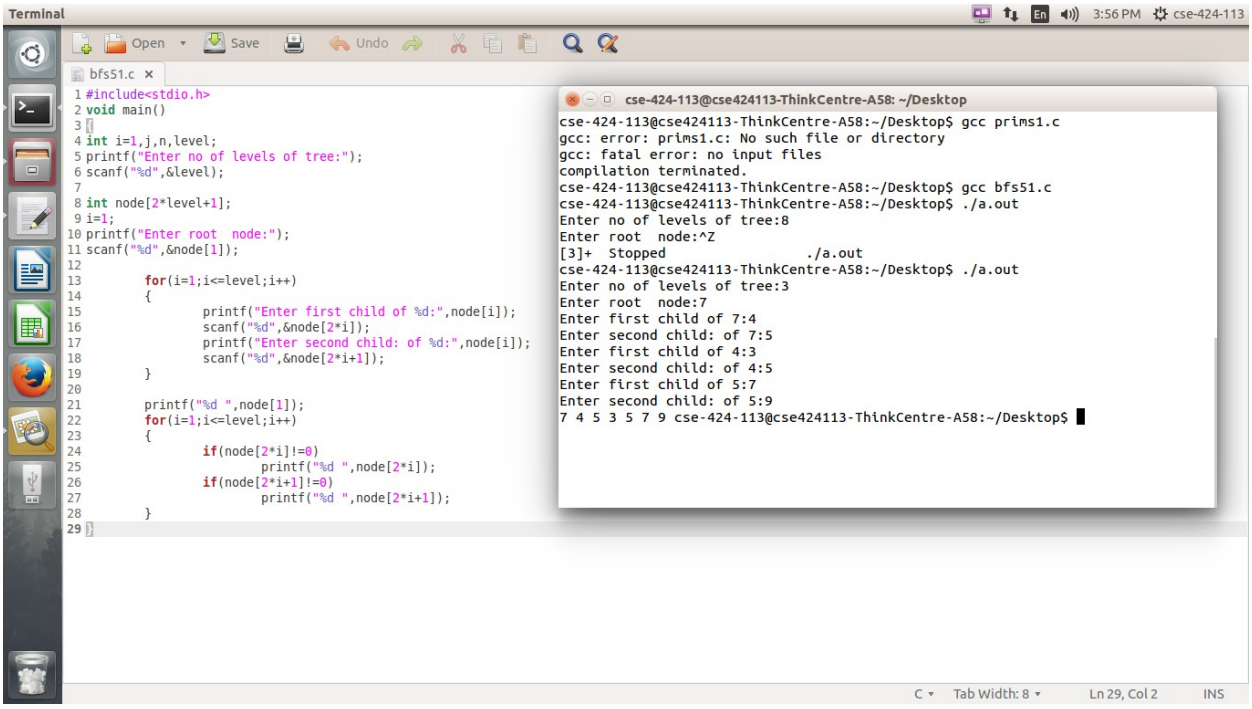
```
#include<stdio.h>
#define max 10
#define INFINITY 1000
int w[max][max];
int n_size;
int p[max];
void input()
{
 printf("\n multistage graph \n");
 printf("\n enter the number of nodes:");
 scanf("%d",&n_size);
 int i;
 for(i=0;i<n_size;i++)
 {
  w[i][j]=0;
  for(int j=i+1;j<n_size;j++)
  {
   printf("enter the weight of edge '%c' to '%c':",65+i,65+j);
   scanf("%d",&w[i][j]);
   w[i][j]=0;
   }
 }
}
void display()
{
 printf("path adjacency matrix \n");
 for(i=0;i<n_size;i++)
 {
  printf("\n");
  for(int j=0;j<n_size;j++)
  {
    printf("\t %d",w[i][j]);
  }
 }
}
int findshort(int sr,int dst)
{
 if(sr=dst)
 return=0;
 else
 {
  int ret=-1;
  int min=INFINITY;
  int tdst;
  for(int i=0;i<n_size;i++)
```

```
{
 if(w[sr][i]!=0)
 {
   ret=0;
   tdst=w[sr][i]+findshort(i,dst);
   if(min>tdst)
  {
   min=tdst;
   p[sr]=i;
  }
 }
```



```
#include<stdio.h>
void main()
{
int node,matrix[10][10],i,j,visited[10],temp[10],k=0;
printf("Enter no of nodes:");
scanf("%d",&node);

for(i=1;i<=node;i++)
{
        for(j=1;j<=node;j++)
        {
                scanf("%d",&matrix[i][j]);

for(i=1;i<=node;i++)
{
        for(j=1;j<=node;j++)
        {
                if(matrix[i][j]==1 && visited[j]==0)
                {
                        visited[j]=1;
                        i=j;
                        k++;
                        temp[k]=matrix[i][j];
                }
        }
}

for(i=1;i<=node;i++)
{
        printf("%d",temp[i]);
}
}
```


Terminal
6:46 AM
}
^
cse-424-1414@cse4241414-ThinkCentre-A58:~/Desktop$ gcc dfs.c
cse-424-1414@cse4241414-ThinkCentre-A58:~/Desktop$ ./a.out
enter no of vertices
5
enter adjacency matrix
0 1 1 0 0
1 0 0 1 1
1 0 0 0 0
0 1 0 0 0
0 1 0 0 0
0
1
3
4
2
0
1
0
2
0
0cse-424-1414@cse4241414-ThinkCentre-A58:~/Desktop$ gcc dfs.c
cse-424-1414@cse4241414-ThinkCentre-A58:~/Desktop$ ./a.out
enter no of vertices8
enter adjacency matrix
0 1 1 1 1 0 0 0
1 0 0 0 0 1 0 0
1 0 0 0 0 1 0 0
1 0 0 0 0 0 1 0
1 0 0 0 0 0 1 0
0 1 1 0 0 0 0 1
0 0 0 1 1 0 0 1
0 0 0 0 0 1 1 0
0
1
5
2
7


Terminal
3:56 PM
cse-424-113
Open
Save
Undo
bfs51.c
#include<stdio.h>
void main()
{
int i=1,j,n,level;
printf("Enter no of levels of tree:");
scanf("%d",&level);
int node[2*level+1];
i=1;
printf("Enter root node:");
scanf("%d",&node[1]);
for(i=1;i<=level;i++)
{
printf("Enter first child of %d:",node[i]);
scanf("%d",&node[2*i]);
printf("Enter second child: of %d:",node[i]);
scanf("%d",&node[2*i+1]);
}
printf("%d ",node[1]);
for(i=1;i<=level;i++)
{
if(node[2*i]!=0)
printf("%d ",node[2*i]);
if(node[2*i+1]!=0)
printf("%d ",node[2*i+1]);
}
}
cse-424-113@cse424113-ThinkCentre-A58: ~/Desktop
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$ gcc prims1.c
gcc: error: prims1.c: No such file or directory
gcc: fatal error: no input files
compilation terminated.
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$ gcc bfs51.c
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$ ./a.out
Enter no of levels of tree:8
Enter root node:^Z
[3]+ Stopped ./a.out
cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$ ./a.out
Enter no of levels of tree:3
Enter root node:7
Enter first child of 7:4
Enter second child: of 7:5
Enter first child of 4:3
Enter second child: of 4:5
Enter first child of 5:7
Enter second child: of 5:9
7 4 5 3 5 7 9 cse-424-113@cse424113-ThinkCentre-A58:~/Desktop$
C
Tab Width: 8
Ln 29, Col 2
INS

```
#include<stdio.h>
void fq(int k, int n, int x[]);
int place(int k, int i,int x[]);
void main()
{
int q,n,k;

printf("Enter no of queens:");
scanf("%d",&q);
int x[q];
n=q;
k=1;
fq(k,n,x);
}

void fq(int k, int n, int x[])
{
int i;
for(i=1;i<=n;i++)
{
        if(place(k,i,x)==1)
        {
                x[k]=i;
                if(k==n)
                {
                        for(i=1;i<=n;i++)
                        {
                        printf("%d ",x[i]);
                                printf("Is the position of Queen\n");
                        }
                        printf("\n");
                }
                else
                {
                        fq(k+1,n,x);
                }
        }
}
}
int place(int k, int i,int x[])
{
//k-row
//n-no of row
//i - column
        int j;
        for(j=1;j<=k-1;j++)
        {
```

```
                if((x[j]==i) || (abs(x[j]-i)==abs(j-k)))
                {
                return 0;
                }
        }
        return 1;
}#
```