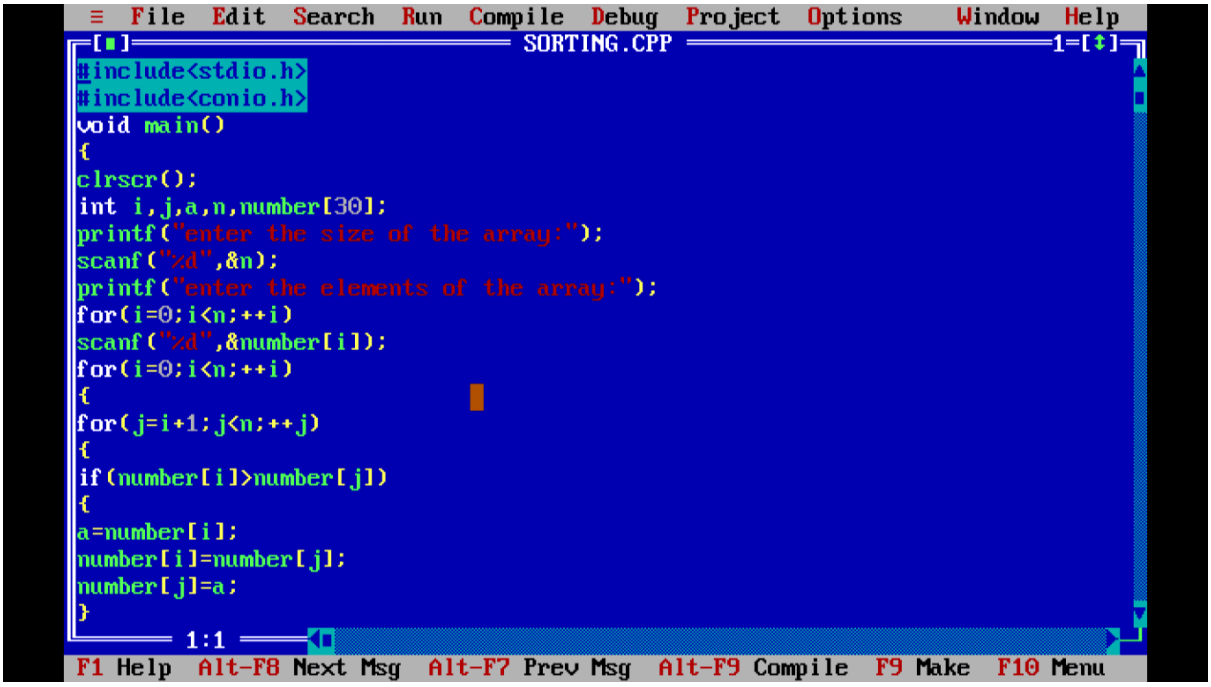
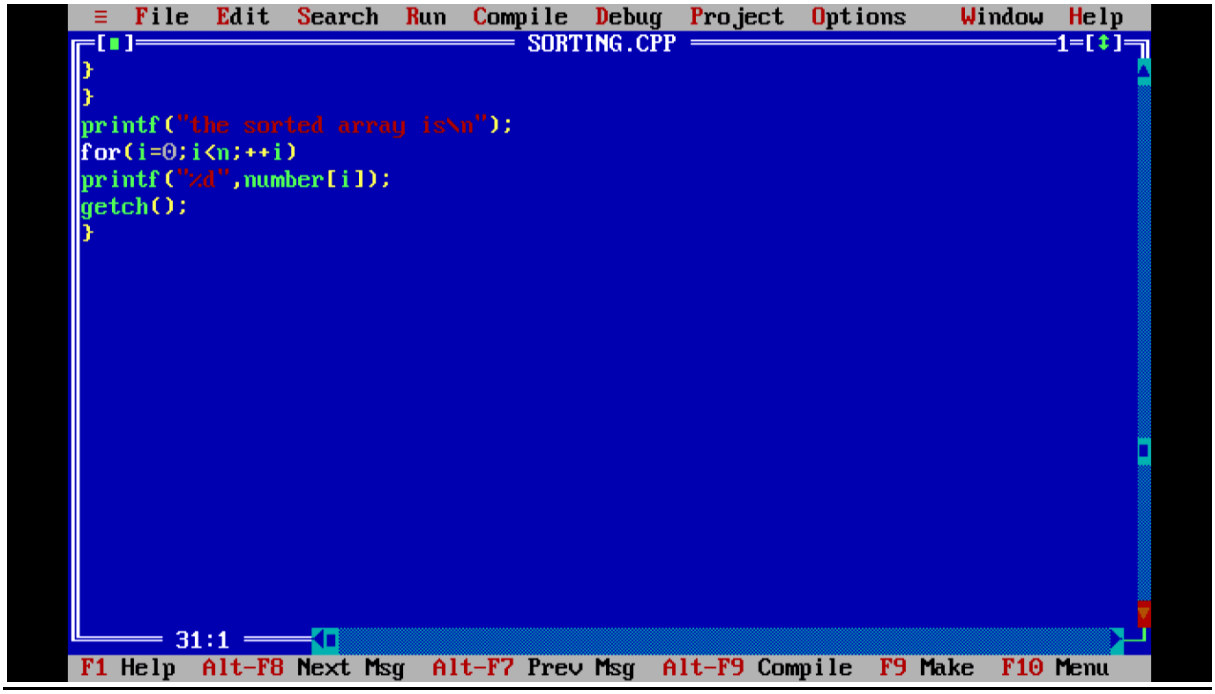
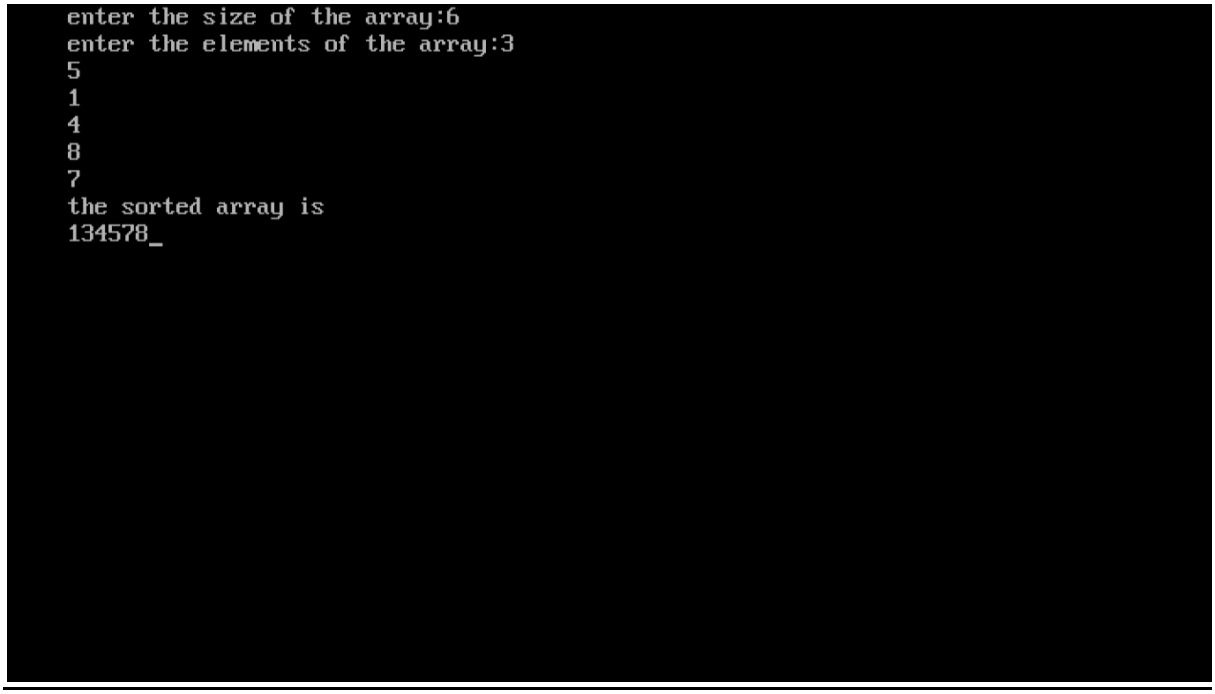
1.Sorting of integer array

PROGRAM



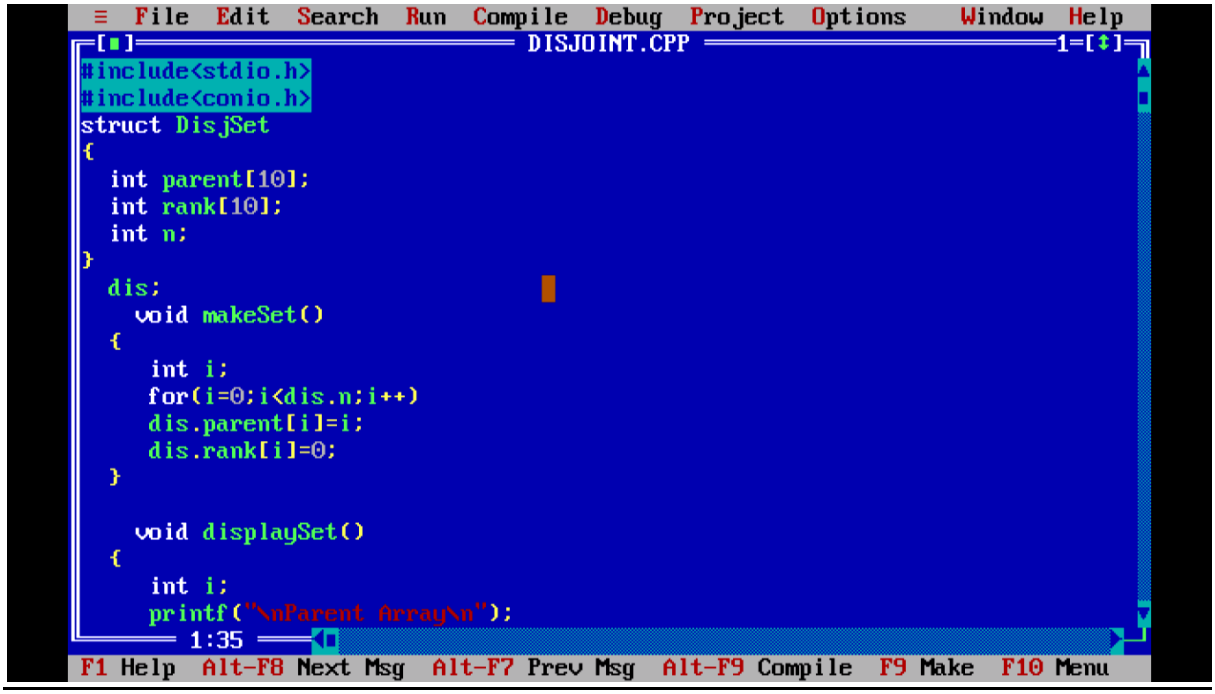


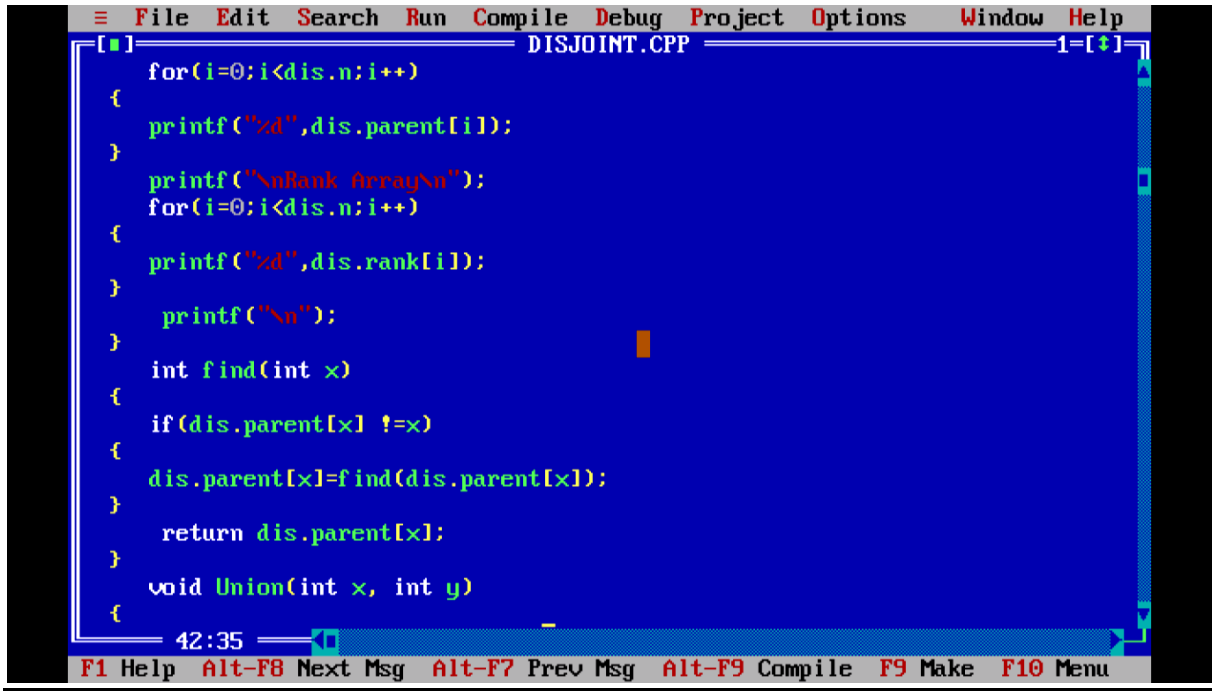
OUTPUT

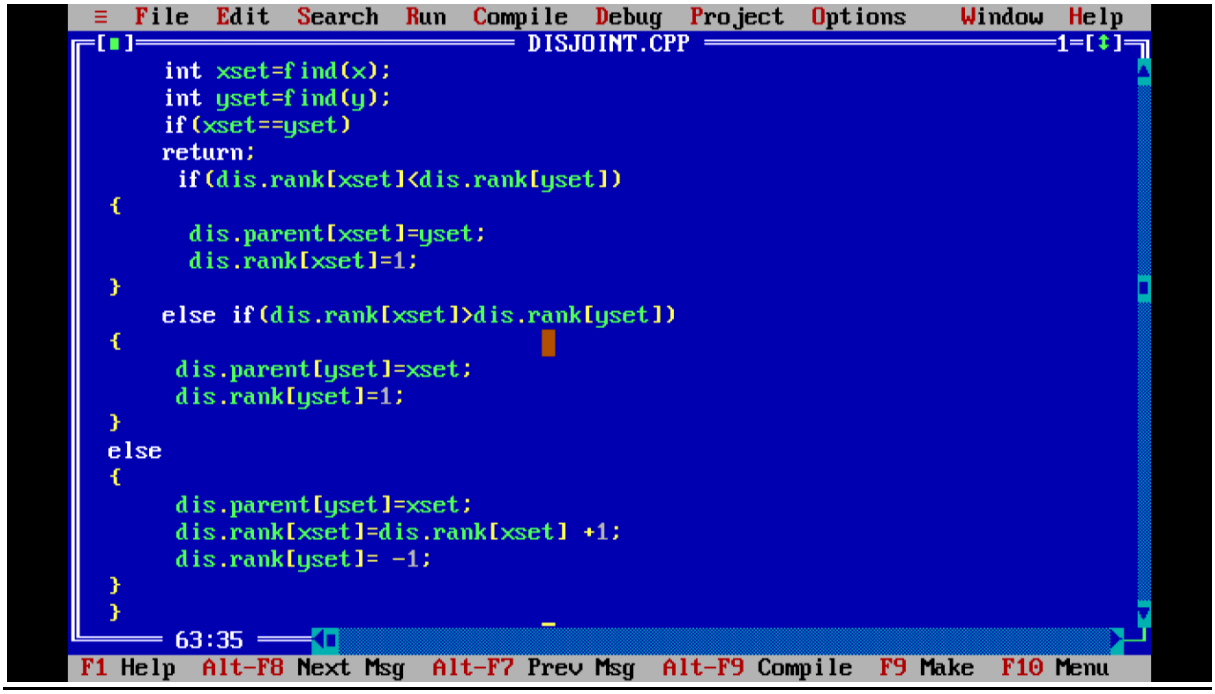

enter the size of the array:6
enter the elements of the array:3
5
1
4
8
7
the sorted array is
134578_

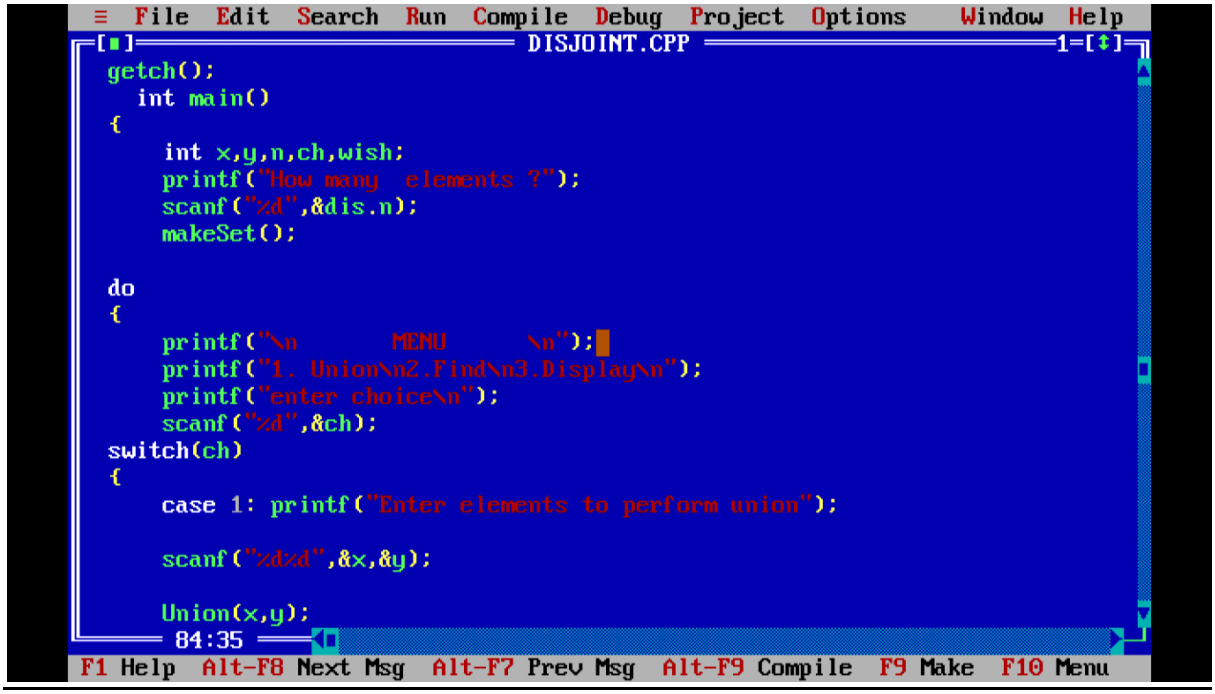
2.Implement Disjoint set operations

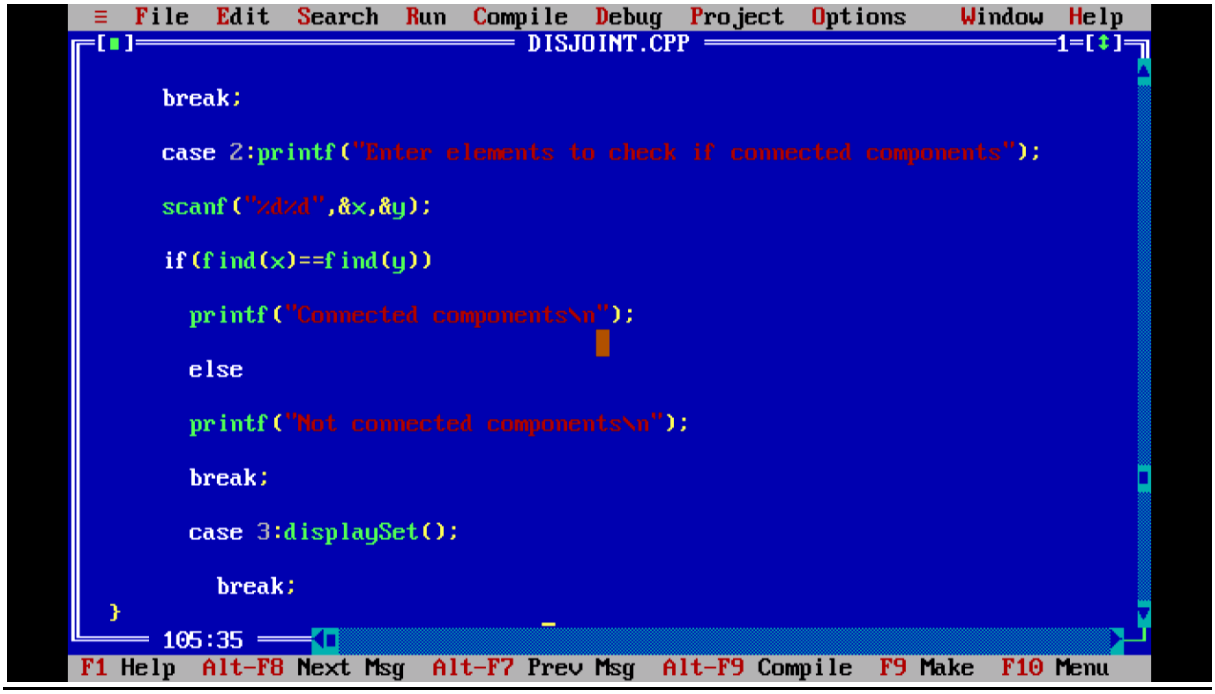
PROGRAM

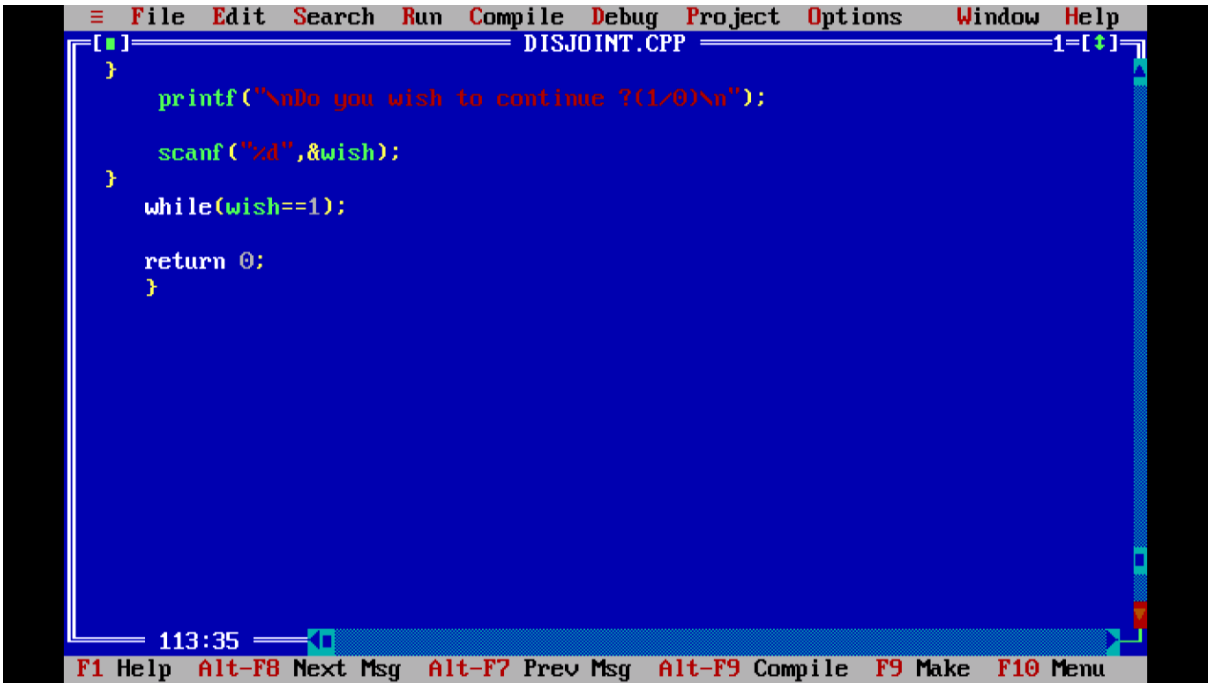




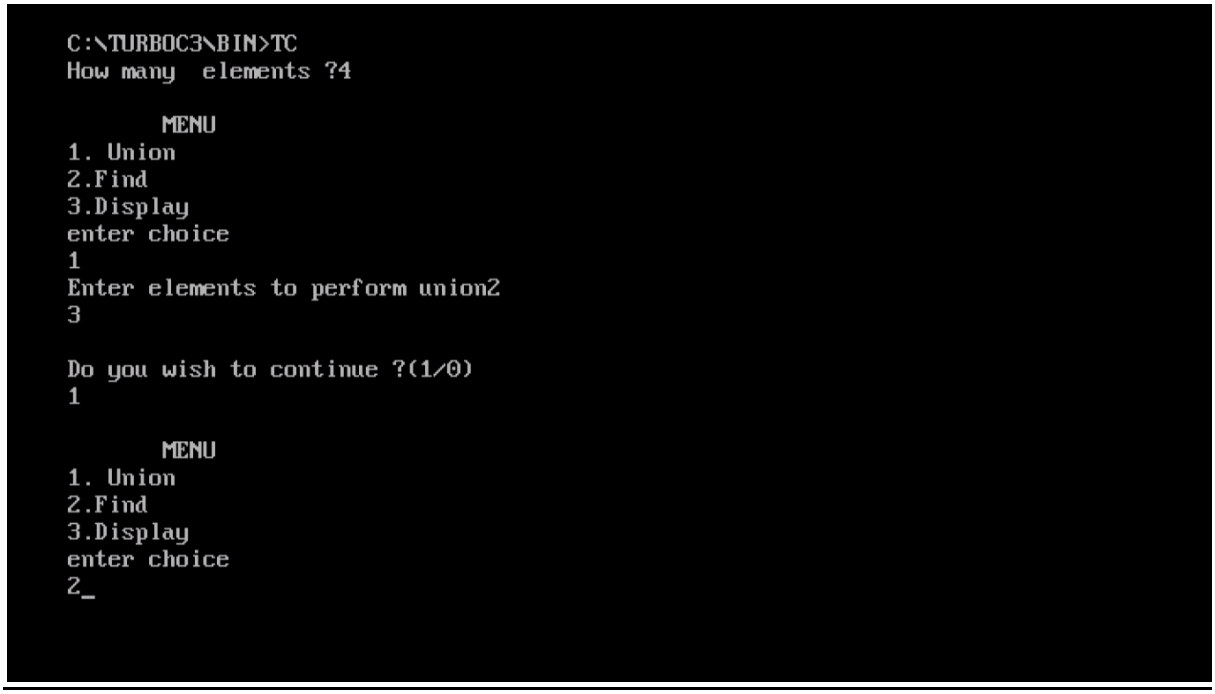

File Edit Search Run Compile Debug Project Options Window Help
DISJOINT.CPP
int xset=find(x);
int yset=find(y);
if(xset==yset)
return;
if(dis.rank[xset]<dis.rank[yset])
{
dis.parent[xset]=yset;
dis.rank[xset]=1;
}
else if(dis.rank[xset]>dis.rank[yset])
{
dis.parent[yset]=xset;
dis.rank[yset]=1;
}
else
{
dis.parent[yset]=xset;
dis.rank[xset]=dis.rank[xset] +1;
dis.rank[yset]= -1;
}
}
63:35
F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu

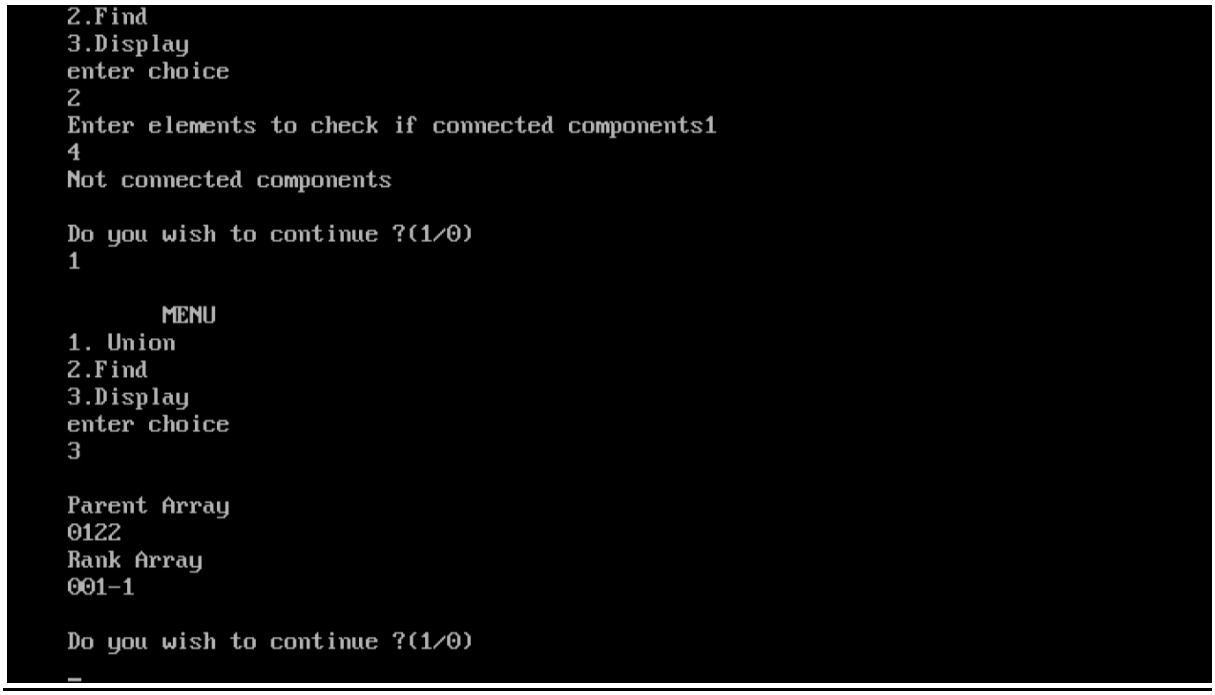

File Edit Search Run Compile Debug Project Options Window Help
DISJOINT.CPP
getch();
int main()
{
int x,y,n,ch,wish;
printf("How many elements ?");
scanf("%d",&dis.n);
makeSet();
do
{
printf("\n MENU \n");
printf("1. Union\n2.Find\n3.Display\n");
printf("enter choice\n");
scanf("%d",&ch);
switch(ch)
{
case 1: printf("Enter elements to perform union");
scanf("%d%d",&x,&y);
Union(x,y);
84:35
F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu


File Edit Search Run Compile Debug Project Options Window Help
DISJOINT.CPP
break;
case 2:printf("Enter elements to check if connected components");
scanf("%d%d",&x,&y);
if(find(x)==find(y))
printf("Connected components\n");
else
printf("Not connected components\n");
break;
case 3:displaySet();
break;
}
105:35
F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu


File Edit Search Run Compile Debug Project Options Window Help
DISJOINT.CPP
}
printf("\nDo you wish to continue ?(1/0)\n");
scanf("%d",&wish);
}
while(wish==1);
return 0;
}
113:35
F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu

OUTPUT


C:\TURBOC3\BIN>TC
How many elements ?4
MENU
1. Union
2.Find
3.Display
enter choice
1
Enter elements to perform union2
3
Do you wish to continue ?(1/0)
1
MENU
1. Union
2.Find
3.Display
enter choice
2_


2.Find
3.Display
enter choice
2
Enter elements to check if connected components1
4
Not connected components
Do you wish to continue ?(1/0)
1
MENU
1. Union
2.Find
3.Display
enter choice
3
Parent Array
0122
Rank Array
001-1
Do you wish to continue ?(1/0)
_

```
enter choice
3

Parent Array
0122
Rank Array
001-1

Do you wish to continue ?(1/0)
1

       MENU
1. Union
2.Find
3.Display
enter choice
3

Parent Array
0122
Rank Array
001-1

Do you wish to continue ?(1/0)
_
```