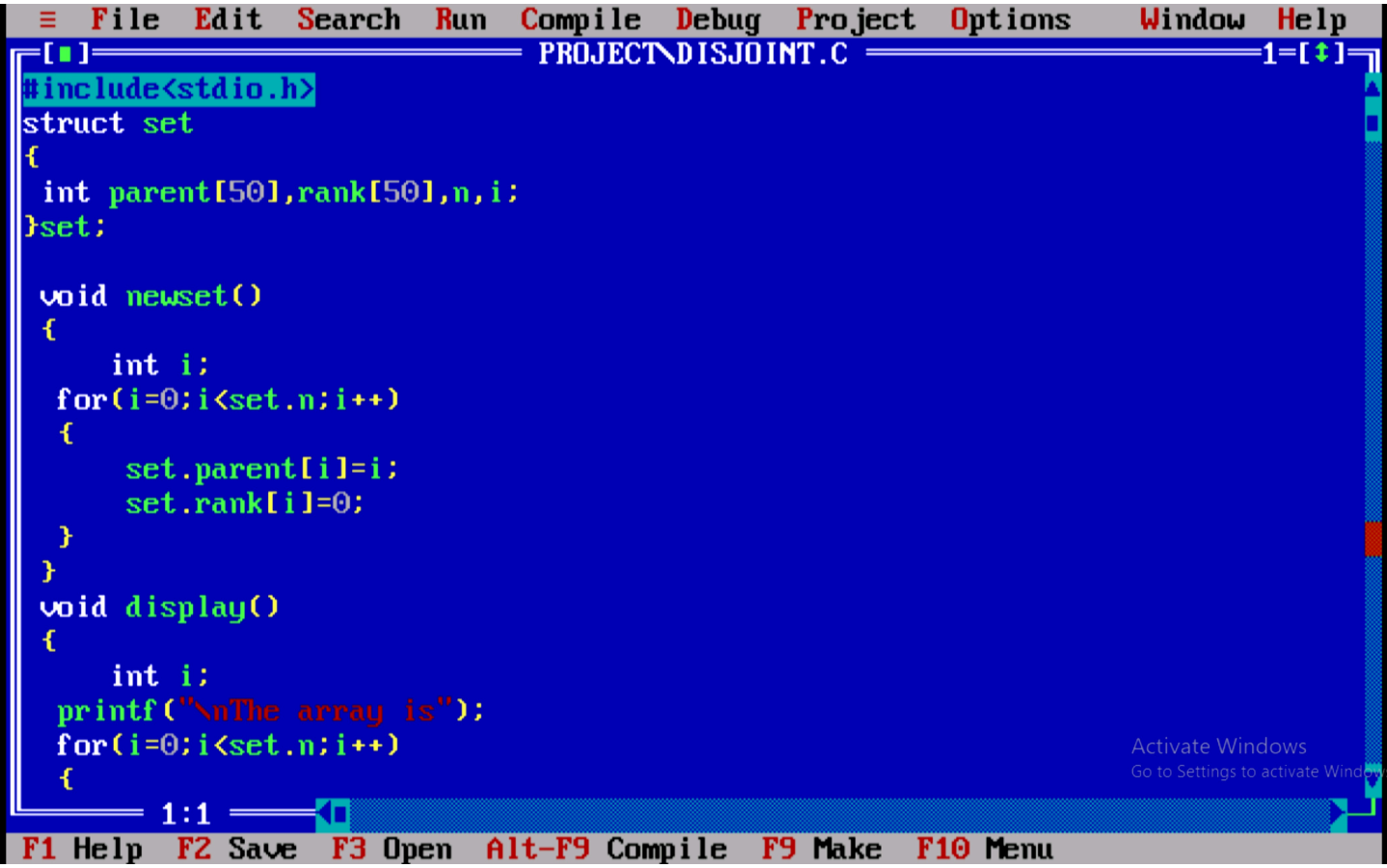
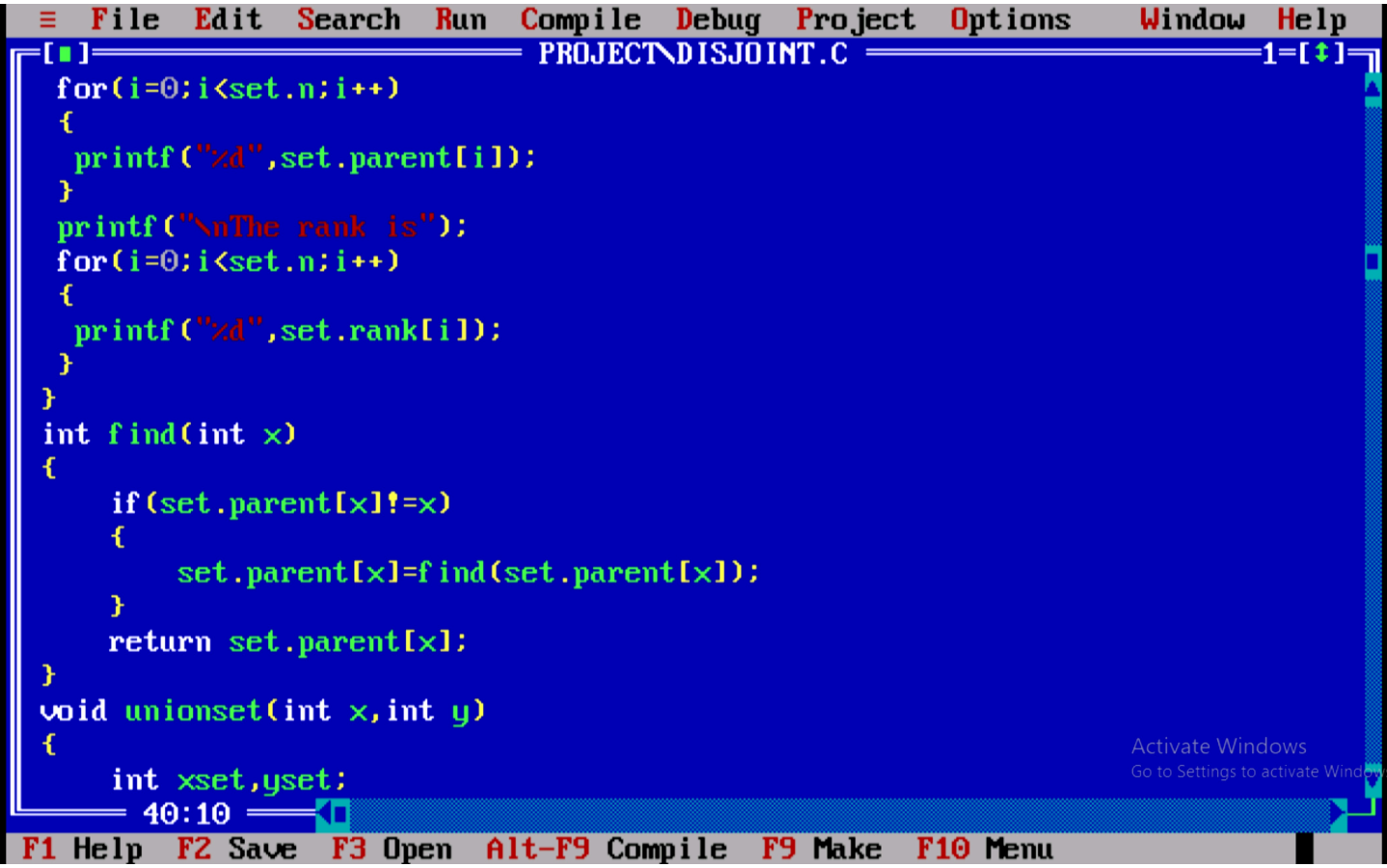
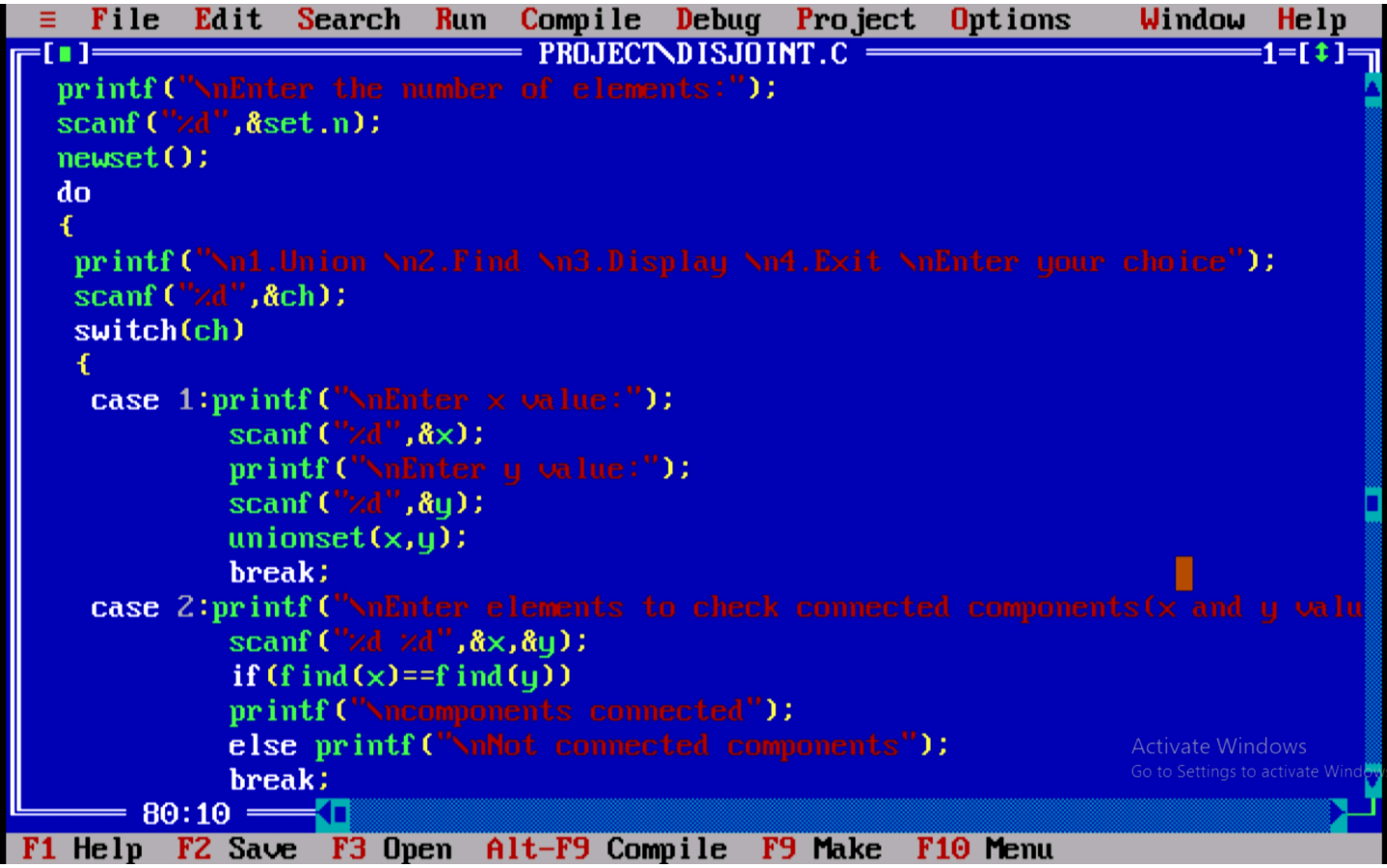
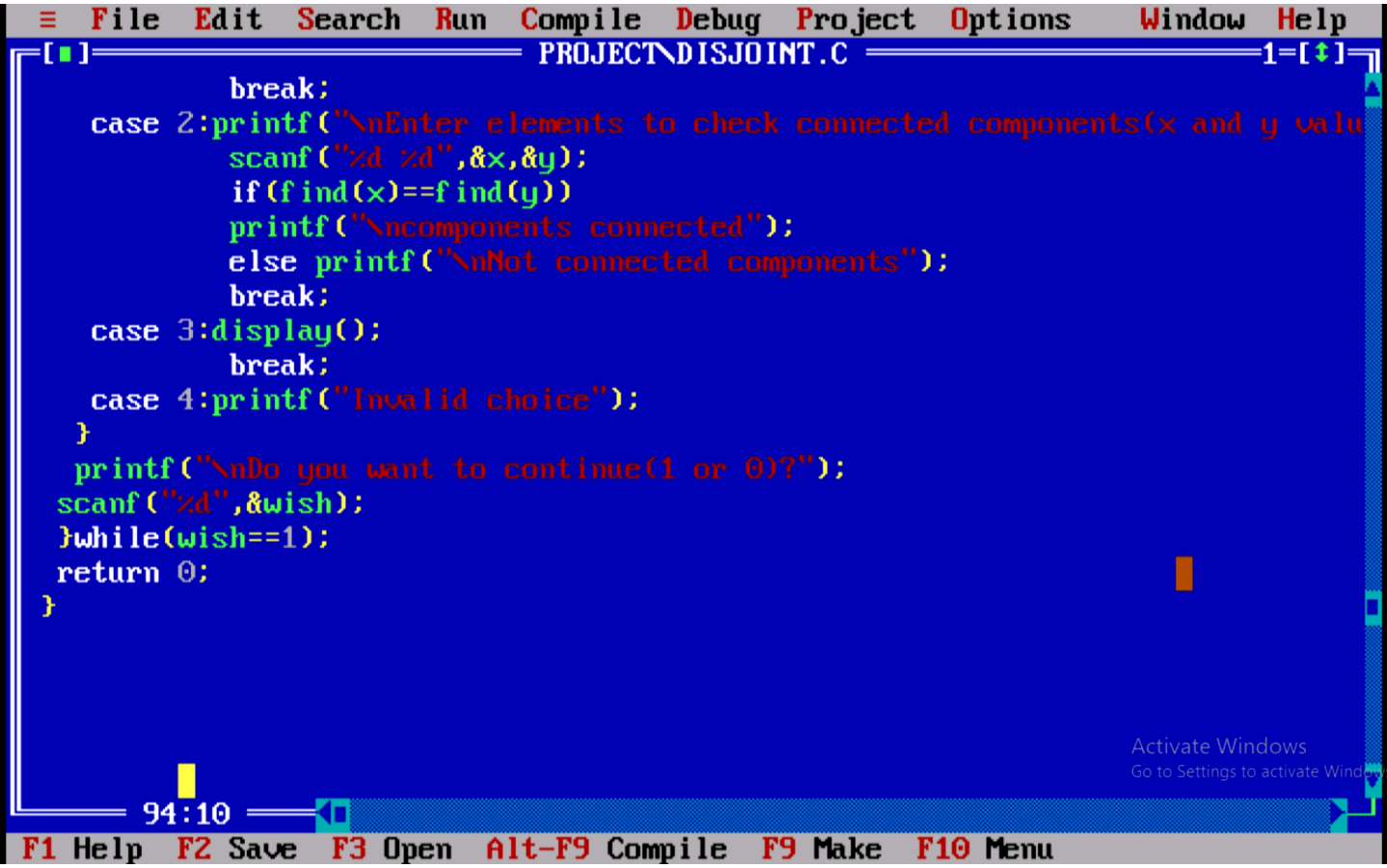

File Edit Search Run Compile Debug Project Options Window Help
PROJECT\DISJOINT.C
#include<stdio.h>
struct set
{
int parent[50],rank[50],n,i;
}set;
void newset()
{
int i;
for(i=0;i<set.n;i++)
{
set.parent[i]=i;
set.rank[i]=0;
}
}
void display()
{
int i;
printf("\nThe array is");
for(i=0;i<set.n;i++)
{
1:1
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu


File Edit Search Run Compile Debug Project Options Window Help
PROJECT\DISJOINT.C
for(i=0;i<set.n;i++)
{
printf("%d",set.parent[i]);
}
printf("\nThe rank is");
for(i=0;i<set.n;i++)
{
printf("%d",set.rank[i]);
}
}
int find(int x)
{
if(set.parent[x]!=x)
{
set.parent[x]=find(set.parent[x]);
}
return set.parent[x];
}
void unionset(int x,int y)
{
int xset,yset;
40:10
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu
Activate Windows
Go to Settings to activate Windows.

```
≡ File  Edit  Search  Run  Compile  Debug  Project  Options    Window  Help
[■]═══════════ PROJECT\DISJOINT.C ═══════════1=[↕]
    int xset,yset;
 xset=find(x);
 yset=find(y);
 if(xset==yset)
 printf("\nThey are in same set");
 if(set.rank[xset]<set.rank[yset])
 {
     set.parent[xset]=yset;
     set.rank[xset]=-1;
 }
 else
 {
     set.parent[yset]=xset;
     set.rank[xset]=set.rank[xset]+1;
     set.rank[yset]=-1;
 }
}
void main()
{
 int x,y,xset,yset,ch,wish;
 printf("\nEnter the number of elements:");
═══ 60:10 ═══
F1 Help  F2 Save  F3 Open  Alt-F9 Compile  F9 Make  F10 Menu
```




File Edit Search Run Compile Debug Project Options Window Help
PROJECT\DISJOINT.C
break;
case 2:printf("\nEnter elements to check connected components(x and y valu
scanf("%d %d",&x,&y);
if(find(x)==find(y))
printf("\ncomponents connected");
else printf("\nNot connected components");
break;
case 3:display();
break;
case 4:printf("Invalid choice");
}
printf("\nDo you want to continue(1 or 0)?");
scanf("%d",&wish);
}while(wish==1);
return 0;
}
Activate Windows
Go to Settings to activate Windows.
94:10
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu

```
C:\TURBOC3\BIN>TC

Enter the number of elements:4

1.Union
2.Find
3.Display
4.Exit
Enter your choice1

Enter x value:8

Enter y value:5

They are in same set
Do you want to continue(1 or 0)?1_
```

```
They are in same set
Do you want to continue(1 or 0)?1

1.Union
2.Find
3.Display
4.Exit
Enter your choice3

The array is0123
The rank is-1000
Do you want to continue(1 or 0)?1

1.Union
2.Find
3.Display
4.Exit
Enter your choice2

Enter elements to check connected components(x and y value):8
6

components connected
Do you want to continue(1 or 0)?0_
```