Prog-5
write a program to implement stack

```
#include <stdio.h>
#define MAX 10
int stack[MAX], top = -1;
void Push (int stack[], int val);
int POP (int stack[]);
int Peep (int stack[]);
void display (int stack[]);
int main()
{
int choice, val;
clrscr();
while(1)
{
Printf ("\n MAIN MENU");
Printf ("\n Push");
Printf ("\n Pop");
Printf ("\n Display Peep");
Printf ("\n Peep");
Printf ("\n Exit");
Printf ("\n Enter choice.");
Scanf ("%d", &choice);
Switch (choice)
{
Case 1 : Push (stack, val);
break;
```

```
case 2 : pop(stack);
         break;
case 3 : display(stack);
         break;
case 4 : peep(stack);
         break;
case 5 : exit(1);
}}}
void push(int stack[], int val)
{ if (top == MAX-1))
{ printf("\n stack overflow");
else
{ printf("\n enter the element to be pushed on to the
stack");
  scanf("%d", &val);
   top++;
  stack[top] = val;
}}
int pop()
{ int val
 if (top == -1)
{ printf("stack is empty");
   return -1;
    }
else
{ printf("element popped from stack: %d", stack[top]);
  top--;
```

```
return val;
}}
void display()
{ int i;
if (TOP == -1)
 printf("no element in stack");
  else
{ printf ("\n element in stack: \n");
 for (i=TOP; i>=0; i--)
 printf ("\n %d", stack[i]);
}}
int peep (int stack[])
{ if (TOP == -1)
{ printf ("\n stack is empty");
   return -1;
  } else {
   printf ("\n the value stored on the top of the
   stack is: %d", stack[TOP]);
return (stack[TOP]); }

  }
```

OUTPUT

MAIN MENU

Push
POP
Display
Peep
Exit

enter your choice : 1

enter the element to be pushed on to the stack : 3

MAIN MENU

Push
POP
Display
Peep
Exit

Enter your choice : 3

element in stack : 3

MAIN MENU

Push
POP
Display
Peep
Exit

Enter your choice: 4

the value stored on the top of the stack is : 3

MAIN MENU

Push

pop
display
peep
exit

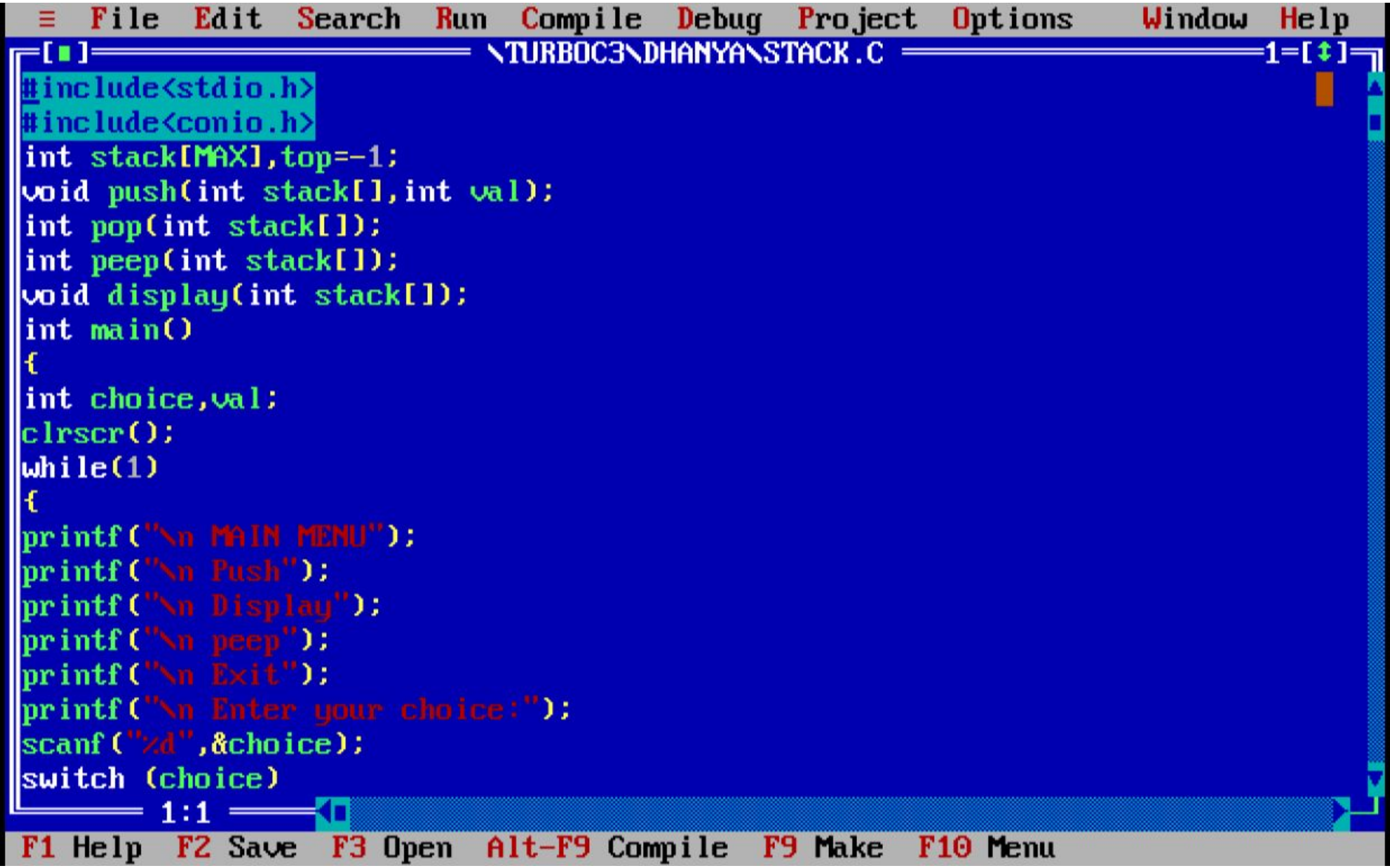
enter your choice : 2

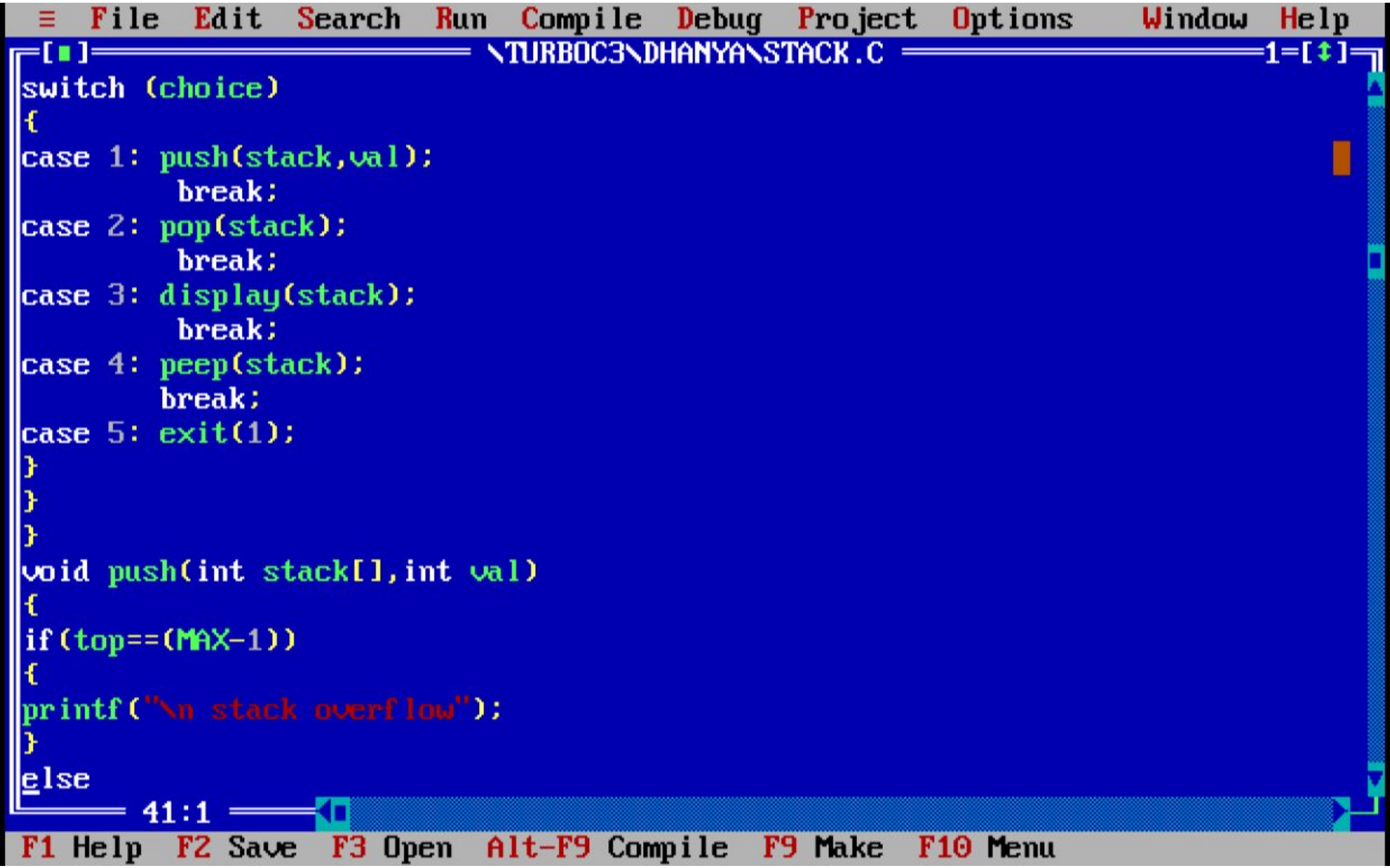
element popped from stack : 3

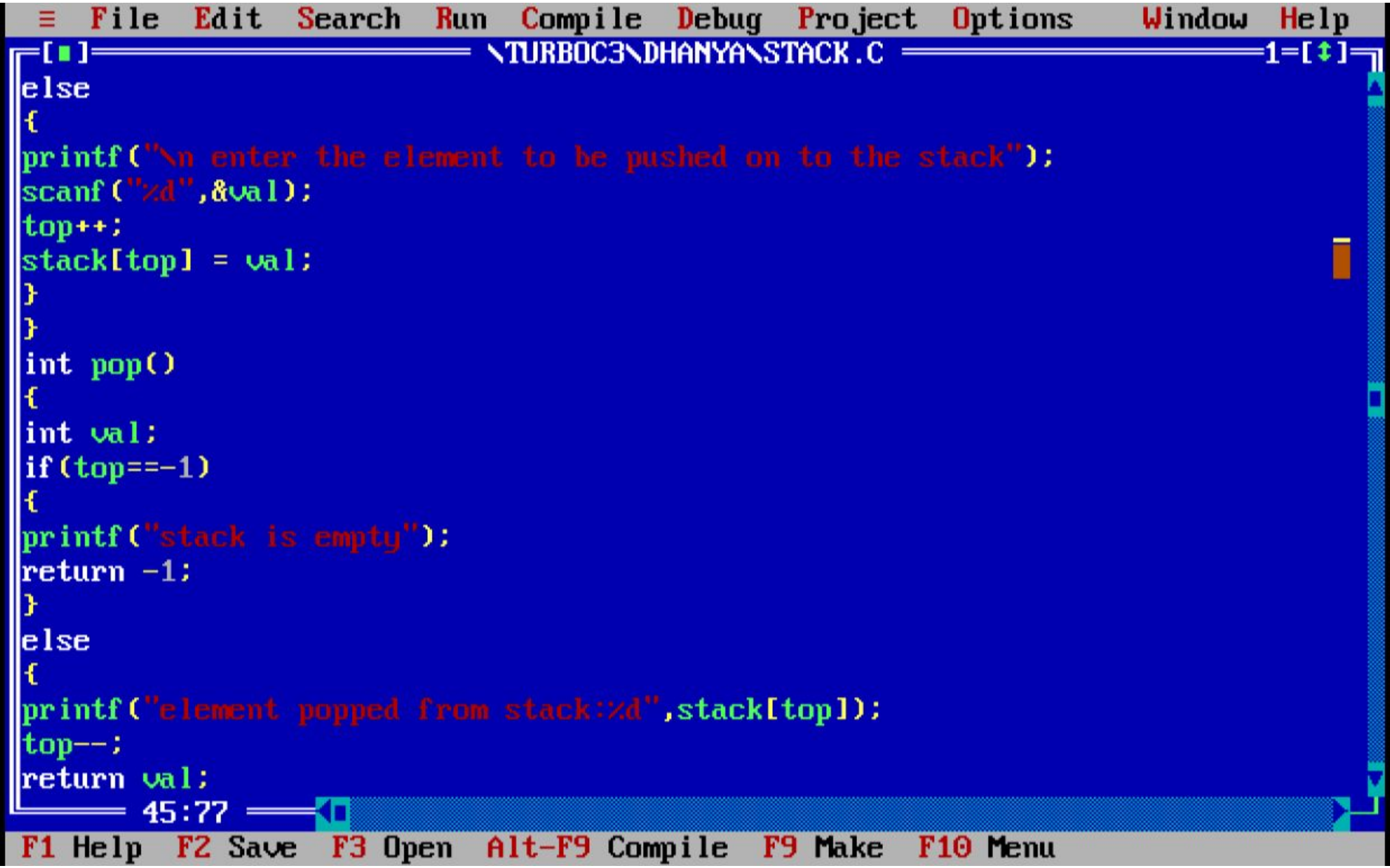
MAIN MENU

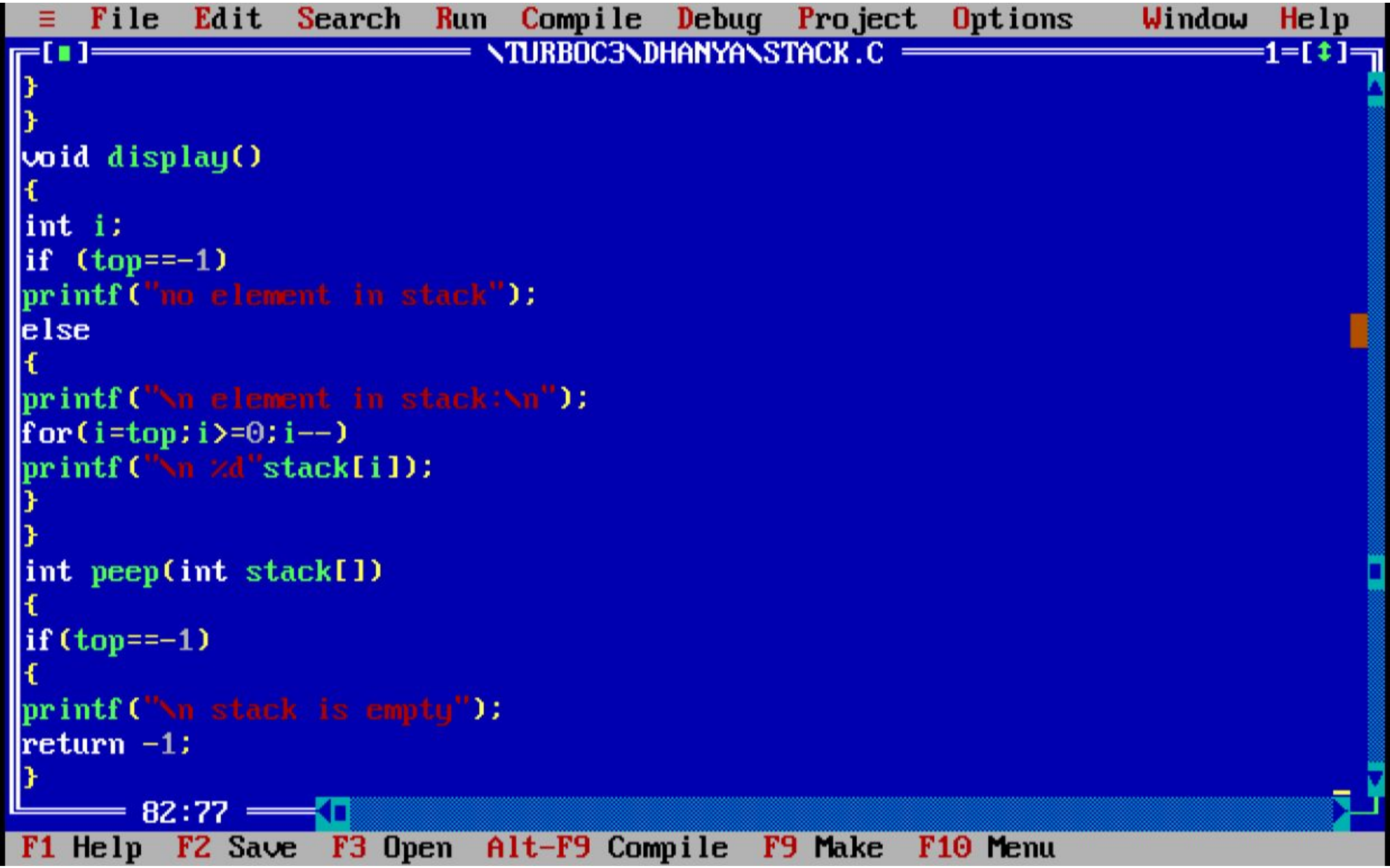
push
pop
display
peep
exit

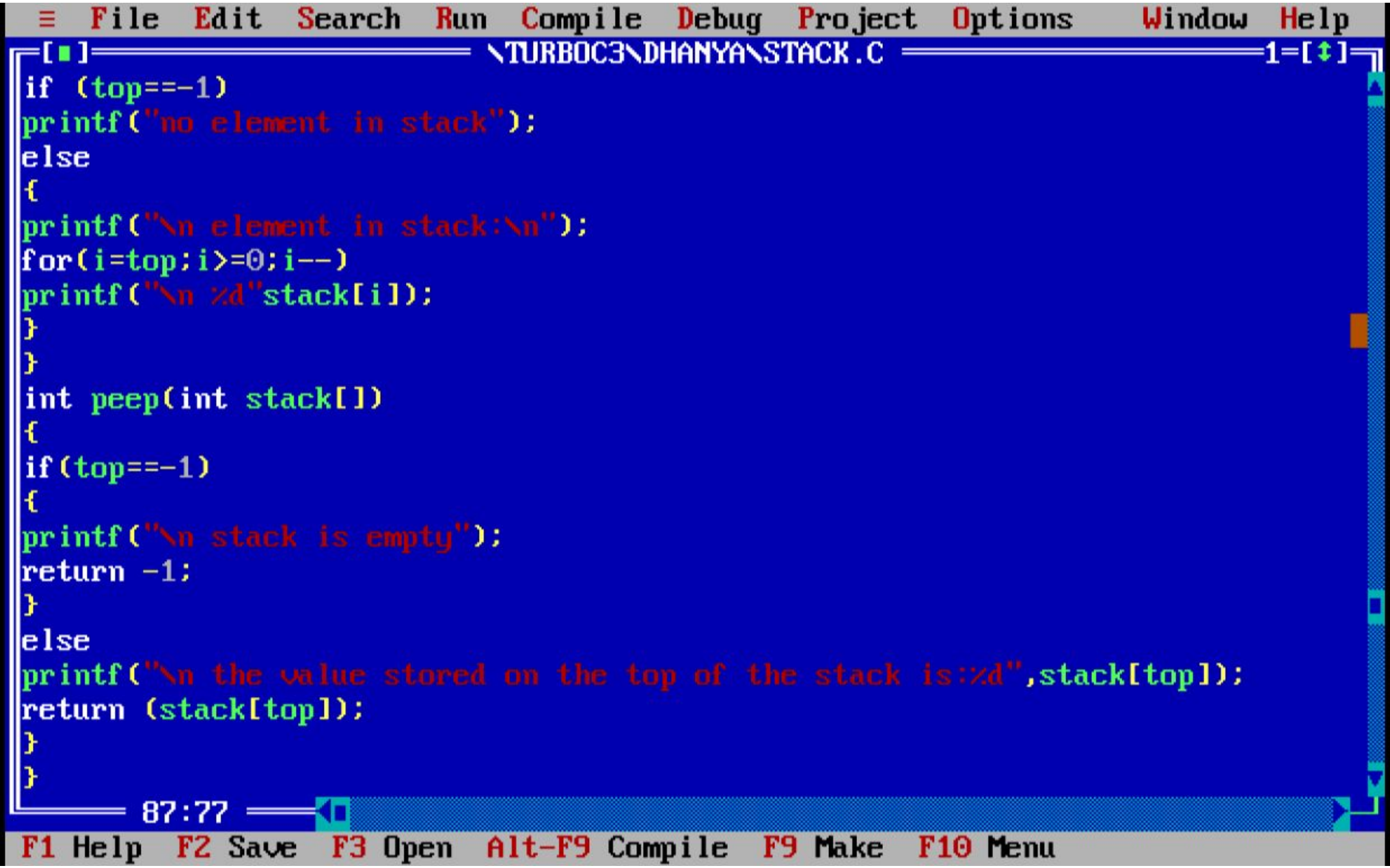
Enter your choice : 5


File Edit Search Run Compile Debug Project Options Window Help
\TURBOC3\DHANYA\STACK.C
#include<stdio.h>
#include<conio.h>
int stack[MAX],top=-1;
void push(int stack[],int val);
int pop(int stack[]);
int peep(int stack[]);
void display(int stack[]);
int main()
{
int choice,val;
clrscr();
while(1)
{
printf("\n MAIN MENU");
printf("\n Push");
printf("\n Display");
printf("\n peep");
printf("\n Exit");
printf("\n Enter your choice:");
scanf("%d",&choice);
switch (choice)
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
\TURBOC3\DHANYA\STACK.C
switch (choice)
{
case 1: push(stack,val);
break;
case 2: pop(stack);
break;
case 3: display(stack);
break;
case 4: peep(stack);
break;
case 5: exit(1);
}
}
}
void push(int stack[],int val)
{
if(top==(MAX-1))
{
printf("\n stack overflow");
}
else
41:1
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu


File Edit Search Run Compile Debug Project Options Window Help
\TURBOC3\DHANYA\STACK.C
else
{
printf("\n enter the element to be pushed on to the stack");
scanf("%d",&val);
top++;
stack[top] = val;
}
}
int pop()
{
int val;
if(top==-1)
{
printf("stack is empty");
return -1;
}
else
{
printf("element popped from stack:%d",stack[top]);
top--;
return val;
45:77
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu


File Edit Search Run Compile Debug Project Options Window Help
\TURBOC3\DHANYA\STACK.C
}
}
void display()
{
int i;
if (top==-1)
printf("no element in stack");
else
{
printf("\n element in stack:\n");
for(i=top;i>=0;i--)
printf("\n %d"stack[i]);
}
}
int peep(int stack[])
{
if(top==-1)
{
printf("\n stack is empty");
return -1;
}
82:77
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu


File Edit Search Run Compile Debug Project Options Window Help
\TURBOC3\DHANYA\STACK.C
if (top==-1)
printf("no element in stack");
else
{
printf("\n element in stack:\n");
for(i=top;i>=0;i--)
printf("\n %d"stack[i]);
}
}
int peep(int stack[])
{
if(top==-1)
{
printf("\n stack is empty");
return -1;
}
else
printf("\n the value stored on the top of the stack is:%d",stack[top]);
return (stack[top]);
}
}
87:77
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu

```
 MAIN MENU
 Push
 pop
 Display
 peep
 Exit
 Enter your choice: 4

 the value stored on the top of the stack is:3
 MAIN MENU
 Push
 pop
 Display
 peep
 Exit
 Enter your choice: 2
element popped from stack:3
```