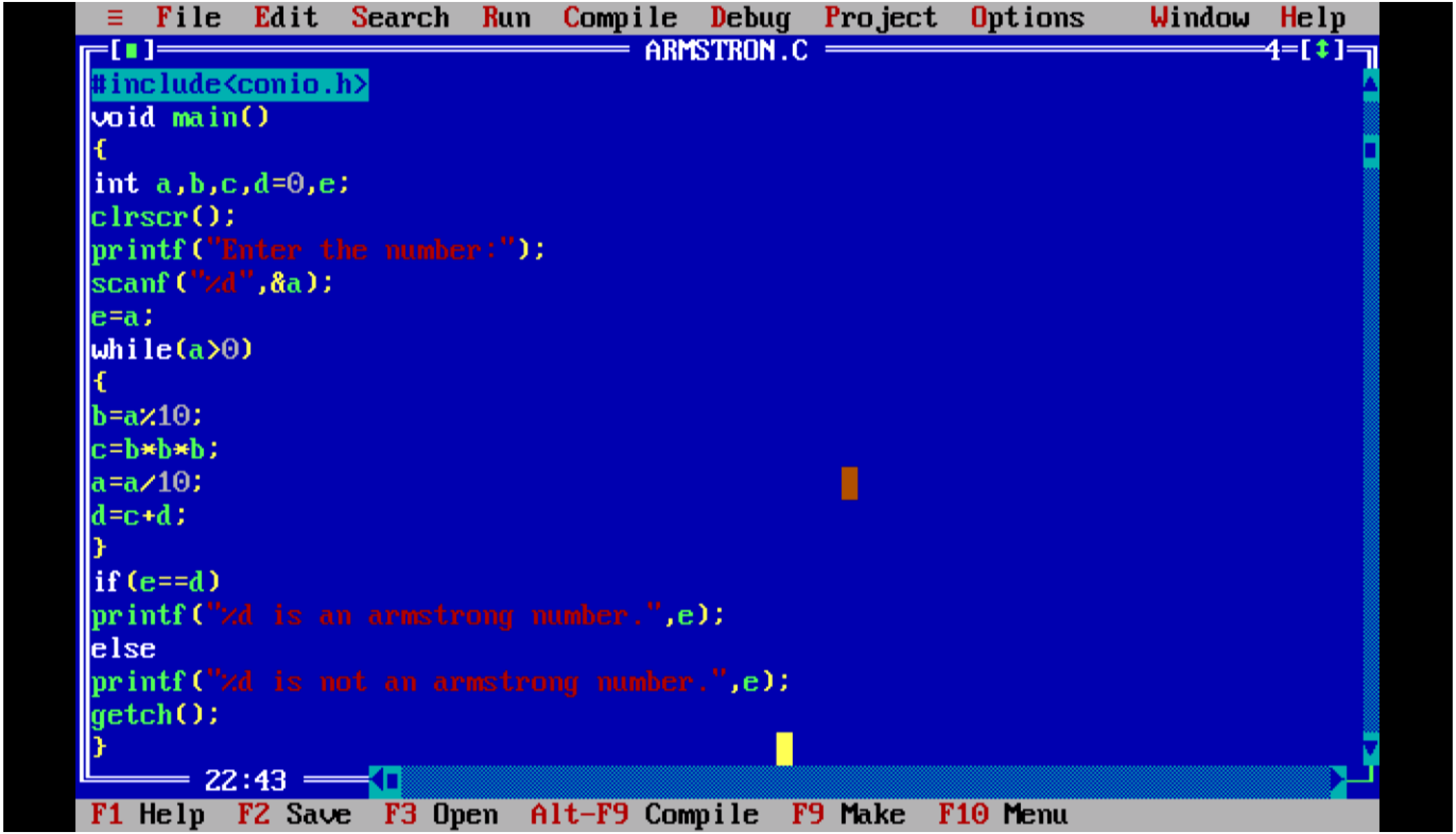
CSA 5761
FUNDAMENTALS OF COMPUTING FOR DATA DEVELOPMENT

ARMSTRONG:

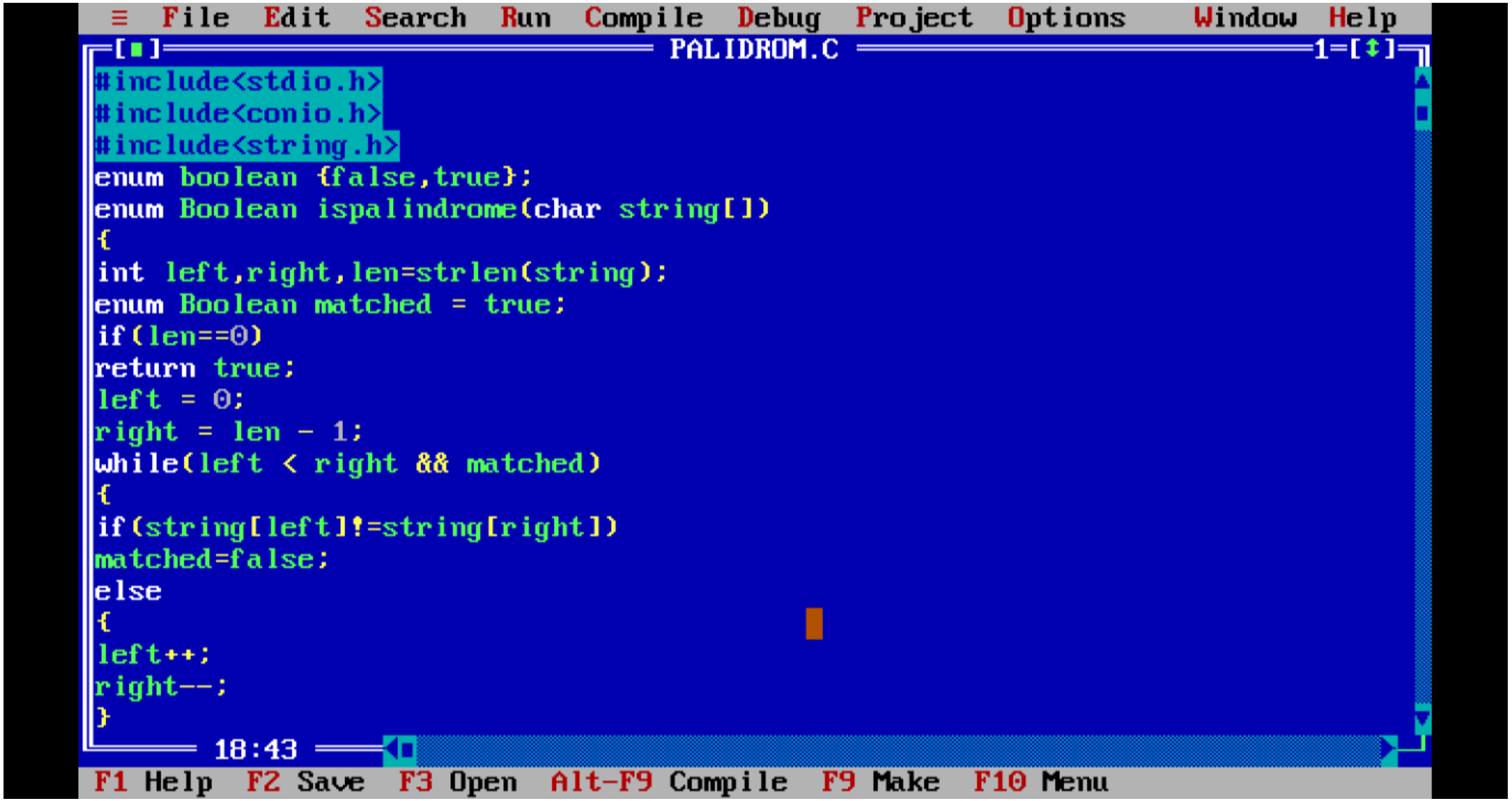

File Edit Search Run Compile Debug Project Options Window Help
ARMSTRON.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a,b,c,d=0,e;
clrscr();
printf("Enter the number:");
scanf("%d",&a);
e=a;
while(a>0)
{
b=a%10;
c=b*b*b;
a=a/10;
d=c+d;
}
if(e==d)
printf("%d is an armstrong number.",e);
else
printf("%d is not an armstrong number.",e);
getch();
9:44
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu

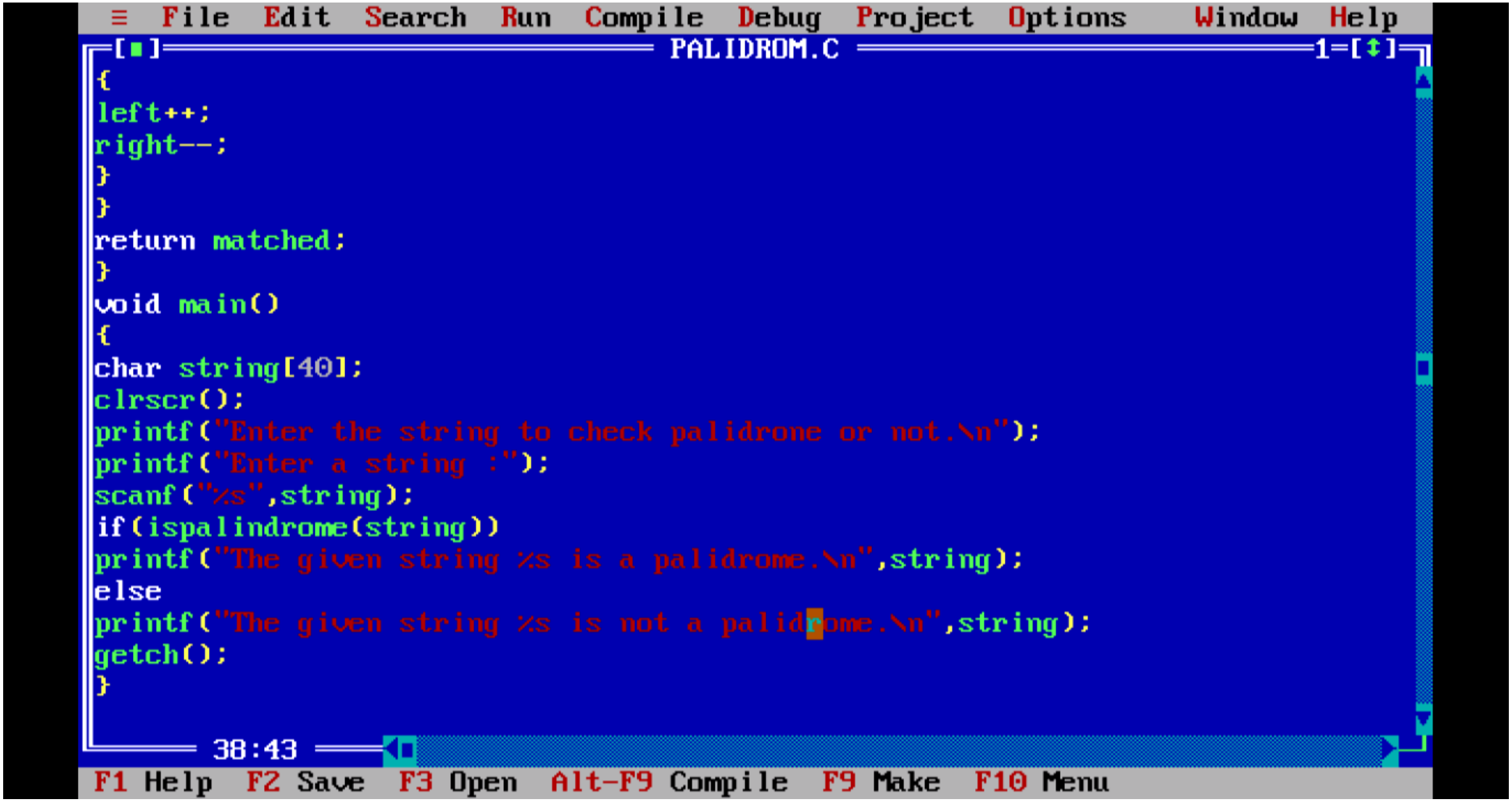

File Edit Search Run Compile Debug Project Options Window Help
ARMSTRON.C
#include<conio.h>
void main()
{
int a,b,c,d=0,e;
clrscr();
printf("Enter the number:");
scanf("%d",&a);
e=a;
while(a>0)
{
b=a%10;
c=b*b*b;
a=a/10;
d=c+d;
}
if(e==d)
printf("%d is an armstrong number.",e);
else
printf("%d is not an armstrong number.",e);
getch();
}
22:43
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu

```
Enter the number:153
153 is an armstrong number._
```

```
Enter the number:123
123 is not an armstrong number.
```

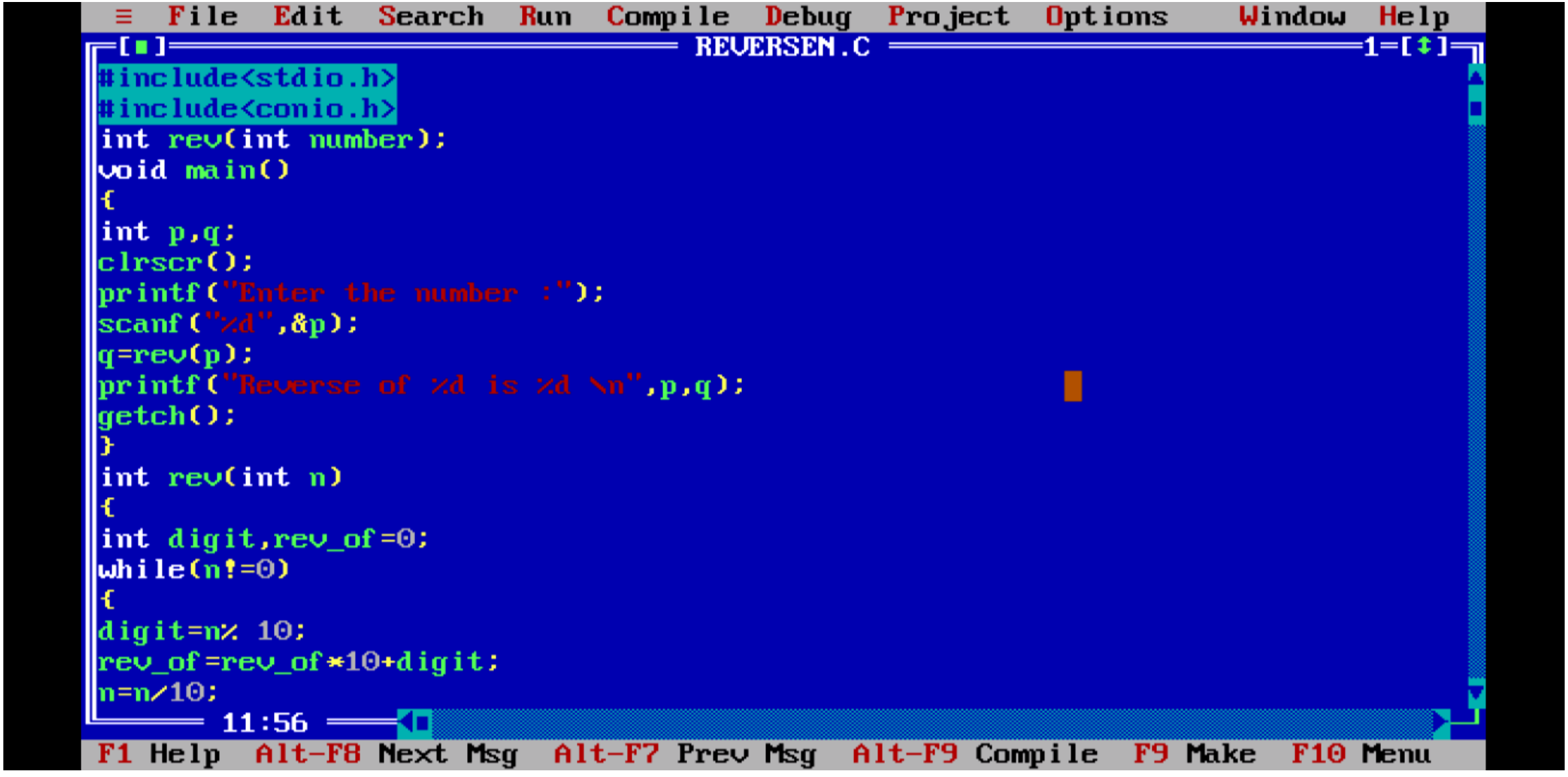
PALIDROME:

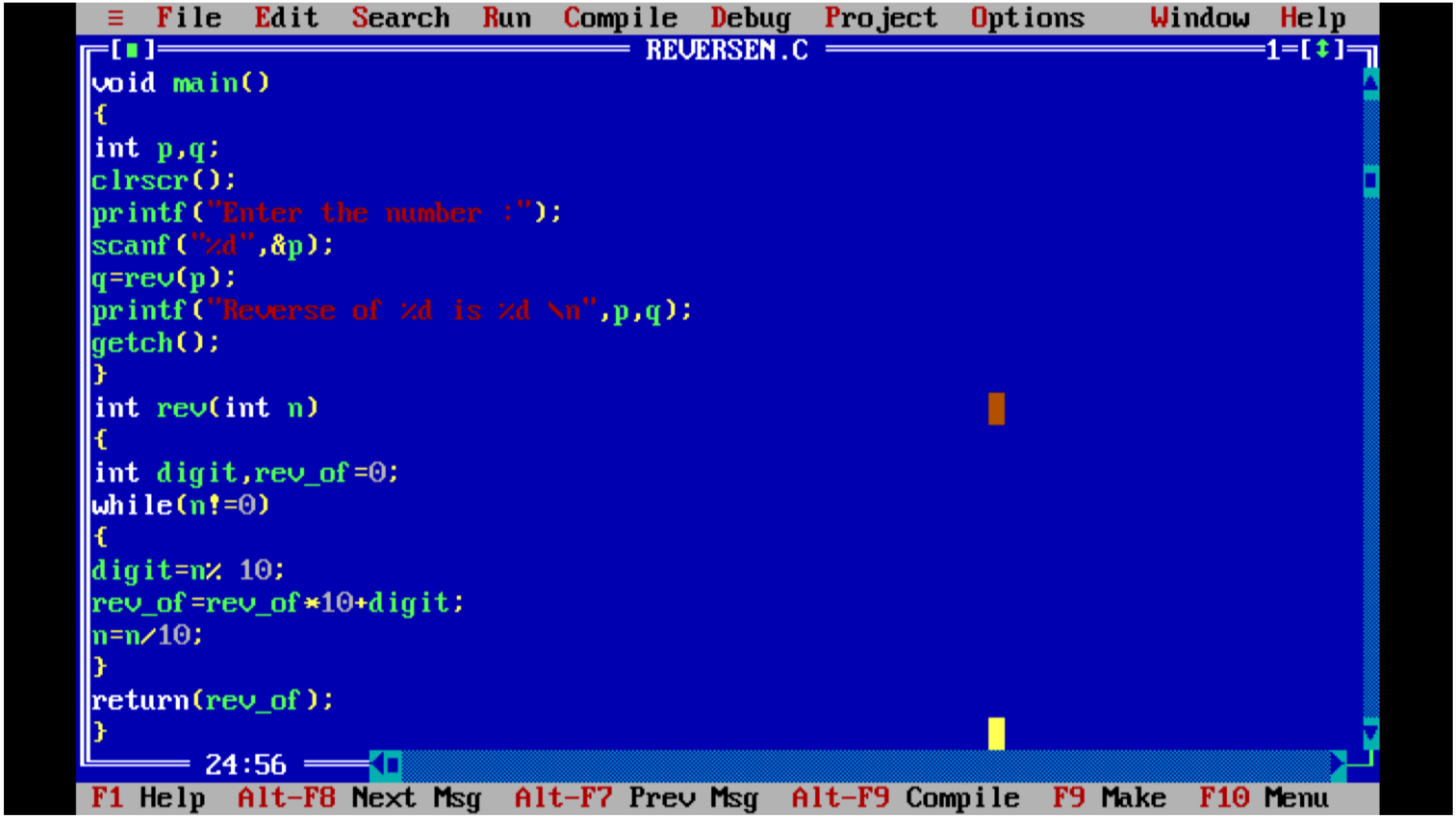

File Edit Search Run Compile Debug Project Options Window Help
PALIDROM.C
#include<stdio.h>
#include<conio.h>
#include<string.h>
enum boolean {false,true};
enum Boolean ispalindrome(char string[])
{
int left,right,len=strlen(string);
enum Boolean matched = true;
if(len==0)
return true;
left = 0;
right = len - 1;
while(left < right && matched)
{
if(string[left]!=string[right])
matched=false;
else
{
left++;
right--;
}
18:43
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu


File Edit Search Run Compile Debug Project Options Window Help
PALIDROM.C
{
left++;
right--;
}
}
return matched;
}
void main()
{
char string[40];
clrscr();
printf("Enter the string to check palidrone or not.\n");
printf("Enter a string :");
scanf("%s",string);
if(ispalindrome(string))
printf("The given string %s is a palidrome.\n",string);
else
printf("The given string %s is not a palidrome.\n",string);
getch();
}
38:43
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu

```
Enter the string to check palidrone or not.
Enter a string :madam
The given string madam is a palidrome.
```

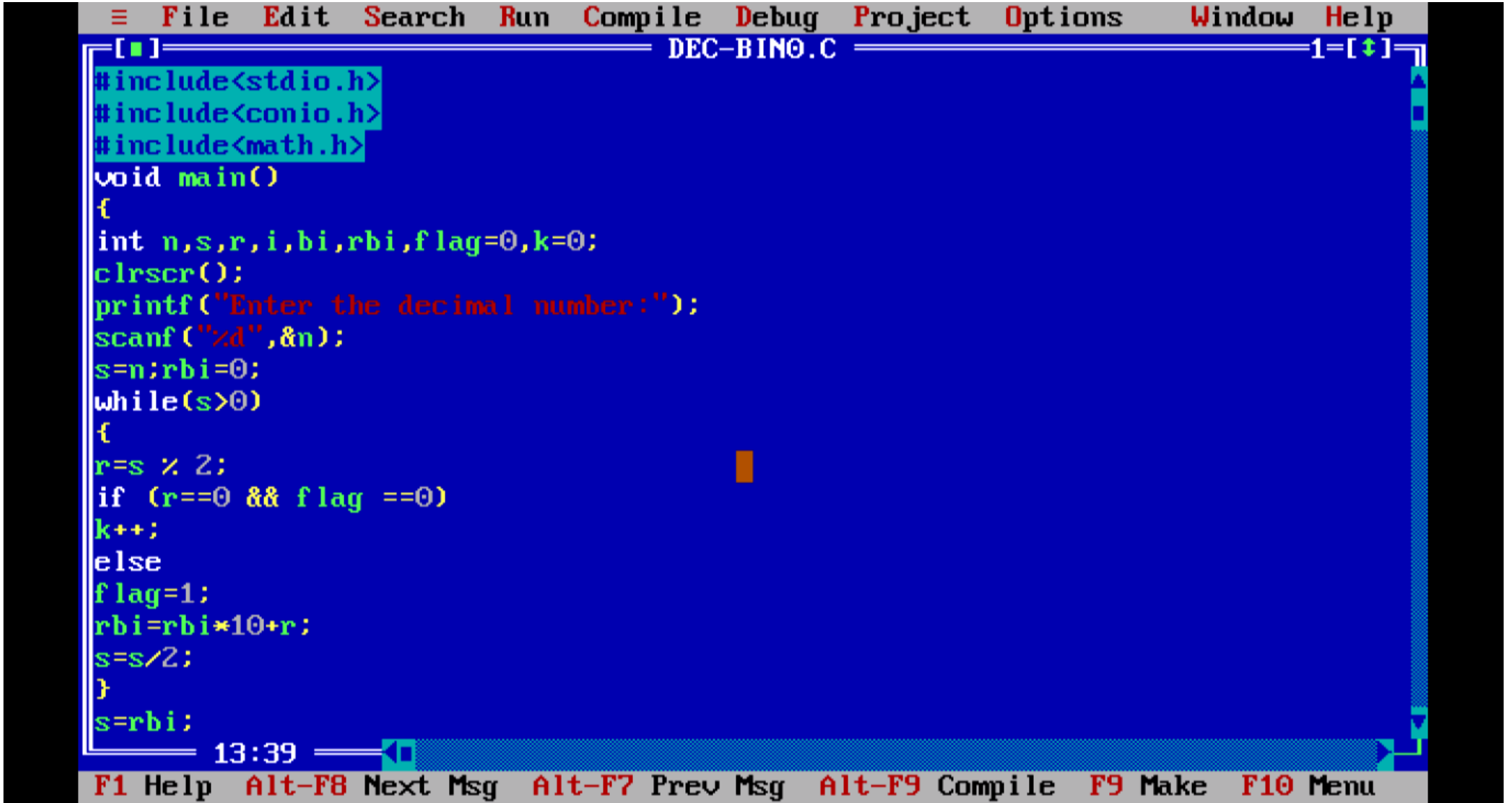
REVERSE NUMBER:

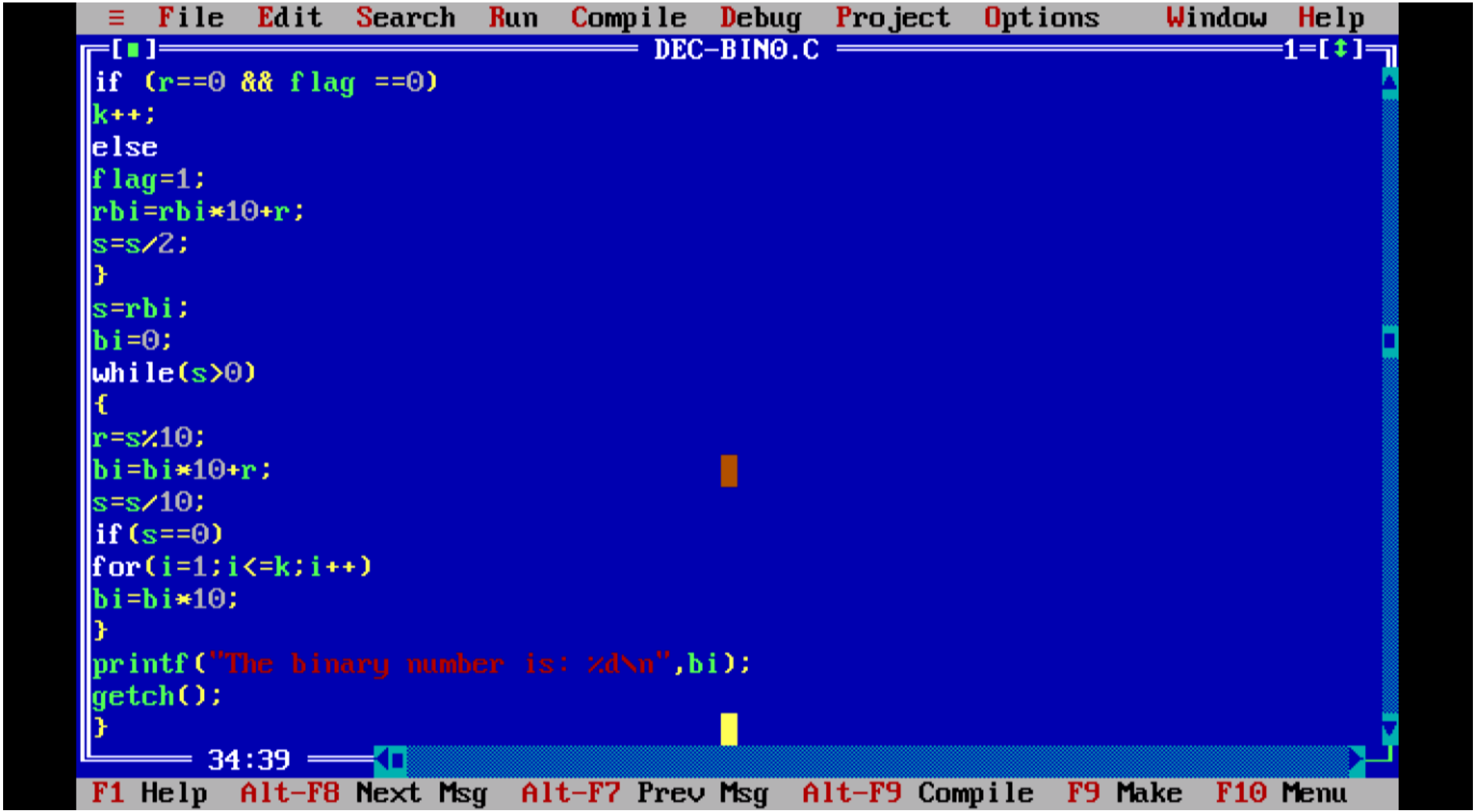



File Edit Search Run Compile Debug Project Options Window Help
REVERSEN.C
void main()
{
int p,q;
clrscr();
printf("Enter the number :");
scanf("%d",&p);
q=rev(p);
printf("Reverse of %d is %d \n",p,q);
getch();
}
int rev(int n)
{
int digit,rev_of=0;
while(n!=0)
{
digit=n% 10;
rev_of=rev_of*10+digit;
n=n/10;
}
return(rev_of);
}
24:56
F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu

```
Enter the number :1234
Reverse of 1234 is 4321
_
```

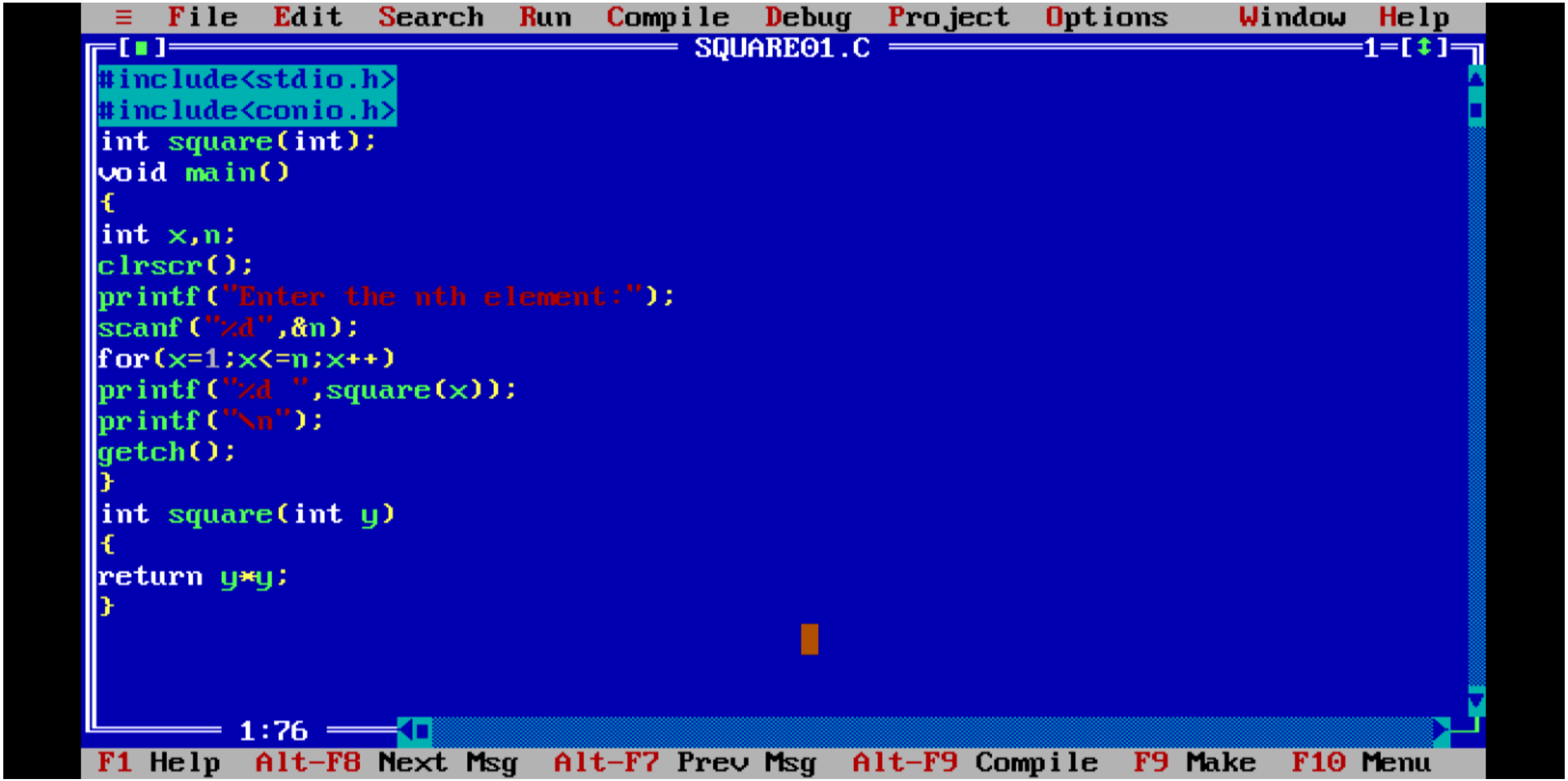
DECIMAL TO BINARY:




File Edit Search Run Compile Debug Project Options Window Help
DEC-BIN0.C
if (r==0 && flag ==0)
k++;
else
flag=1;
rbi=rbi*10+r;
s=s/2;
}
s=rbi;
bi=0;
while(s>0)
{
r=s%10;
bi=bi*10+r;
s=s/10;
if(s==0)
for(i=1;i<=k;i++)
bi=bi*10;
}
printf("The binary number is: %d\n",bi);
getch();
}
34:39
F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu

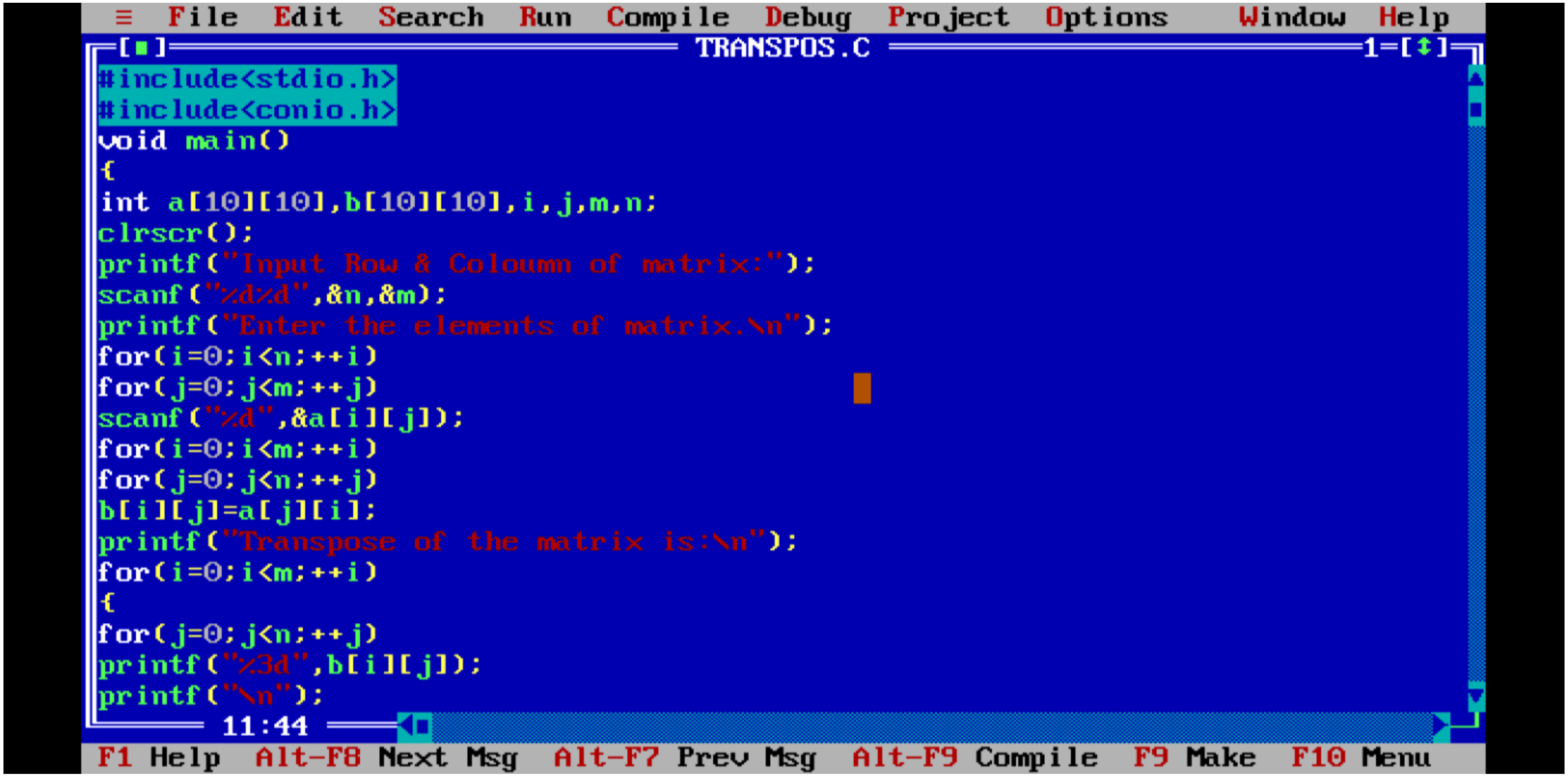
```
Enter the decimal number:14
The binary number is: 1110
_
```

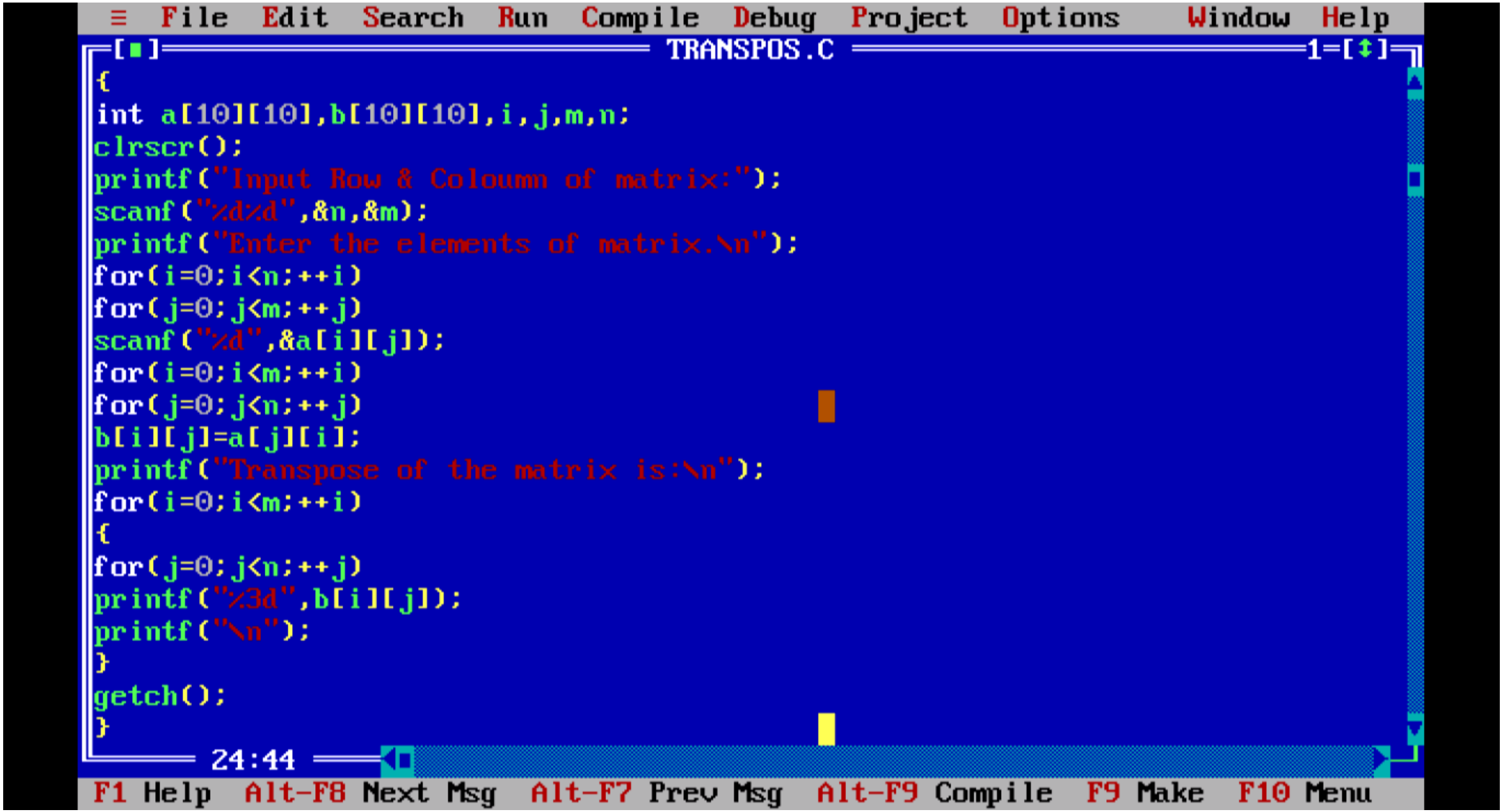
SQUARE OF A DECIMAL:




Enter the nth element:8
1 4 9 16 25 36 49 64

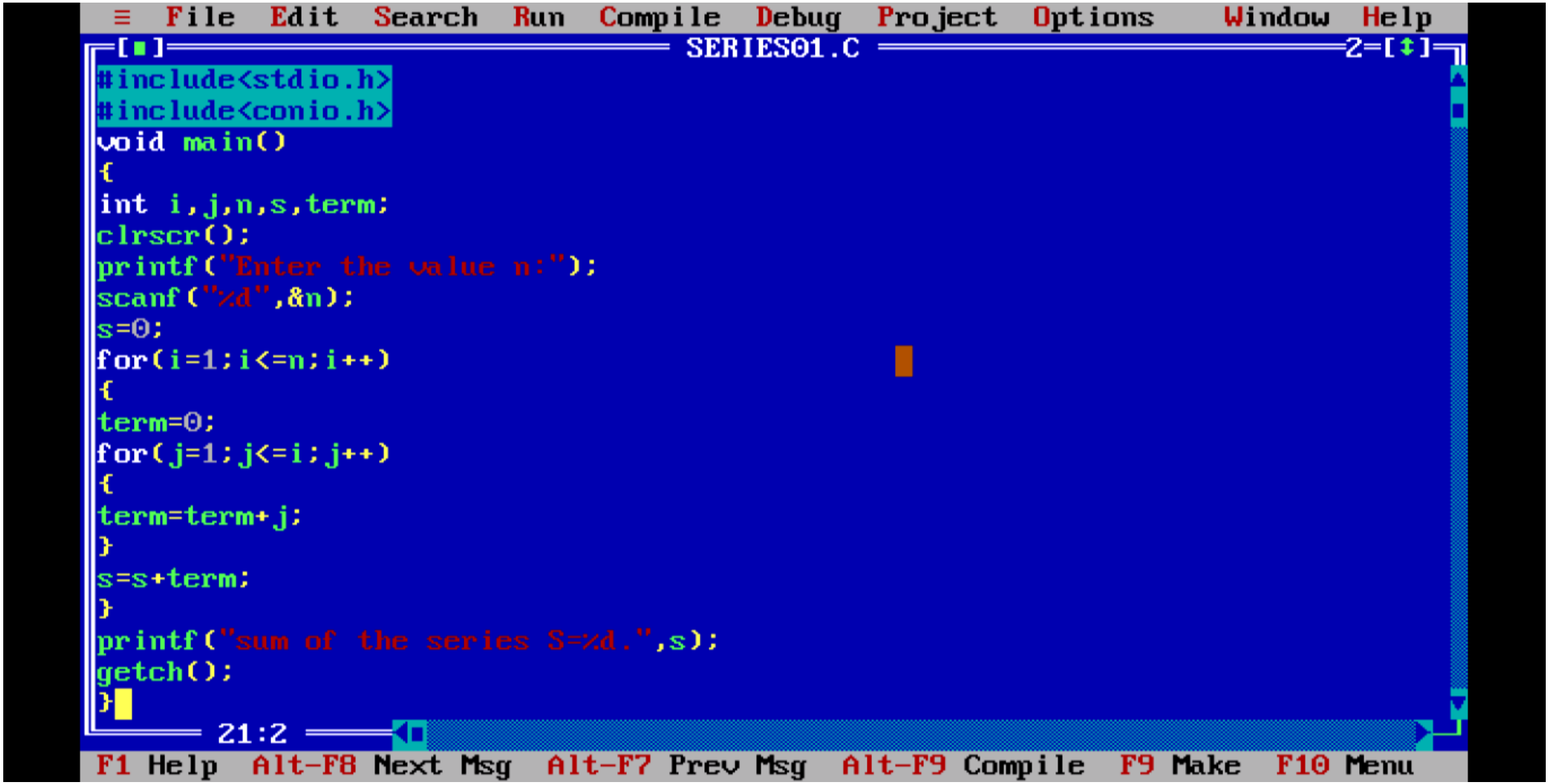
TRANSPOSE OF A MATRIX:




File Edit Search Run Compile Debug Project Options Window Help
TRANSPOS.C
{
int a[10][10],b[10][10],i,j,m,n;
clrscr();
printf("Input Row & Coloumn of matrix:");
scanf("%d%d",&n,&m);
printf("Enter the elements of matrix.\n");
for(i=0;i<n;++i)
for(j=0;j<m;++j)
scanf("%d",&a[i][j]);
for(i=0;i<m;++i)
for(j=0;j<n;++j)
b[i][j]=a[j][i];
printf("Transpose of the matrix is:\n");
for(i=0;i<m;++i)
{
for(j=0;j<n;++j)
printf("%3d",b[i][j]);
printf("\n");
}
getch();
}
24:44
F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu

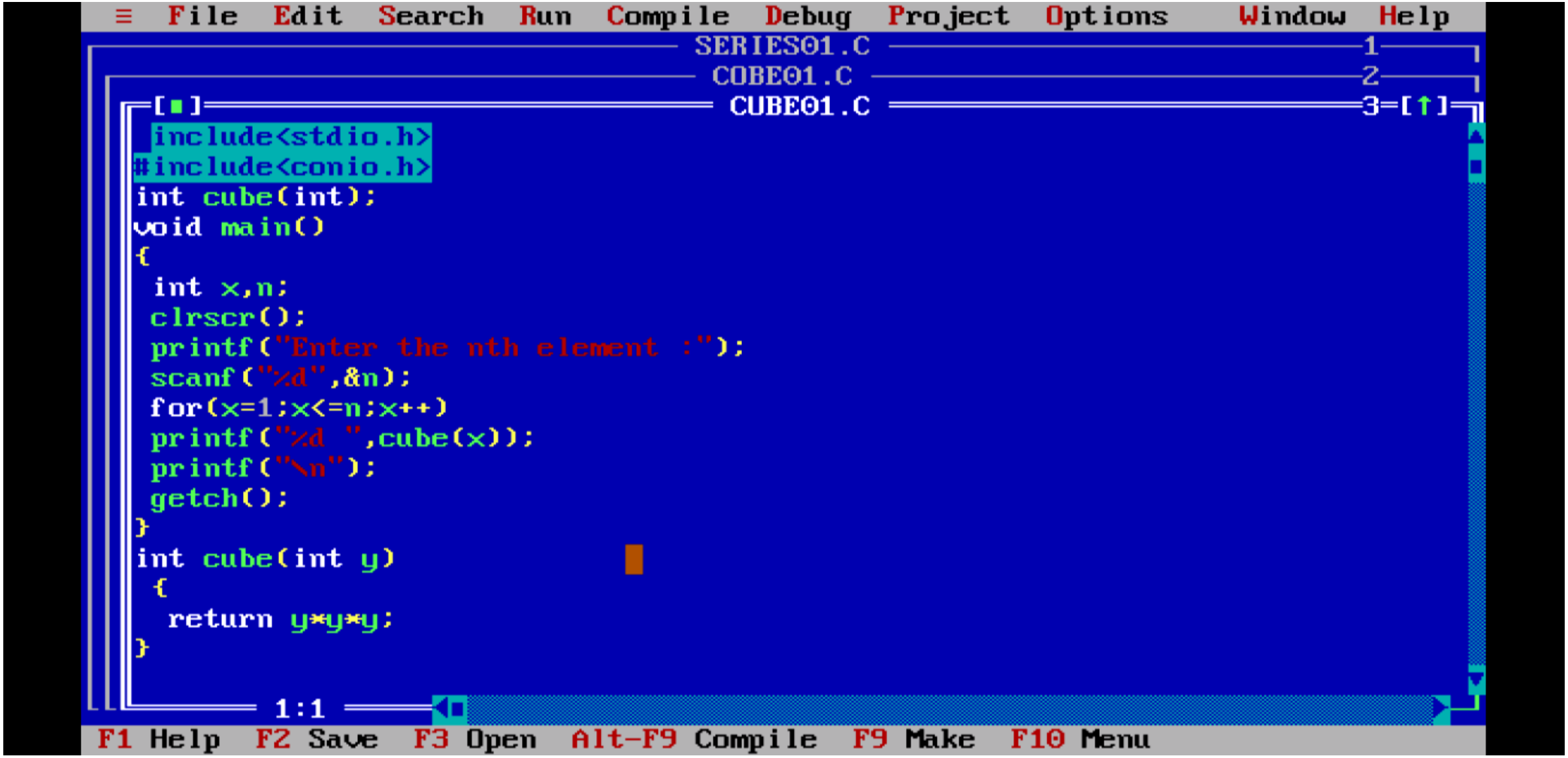
```
Input Row & Coloumn of matrix:3 3
Enter the elements of matrix.
1 2 3
4 5 6
7 8 9
Transpose of the matrix is:
  1  4  7
  2  5  8
  3  6  9

_
```

SUM OF SERIES:



```
Enter the value n:4
sum of the series S=20.
```

CUBE OF A DECIMAL:



```
Enter the nth element :8
1 8 27 64 125 216 343 512
```

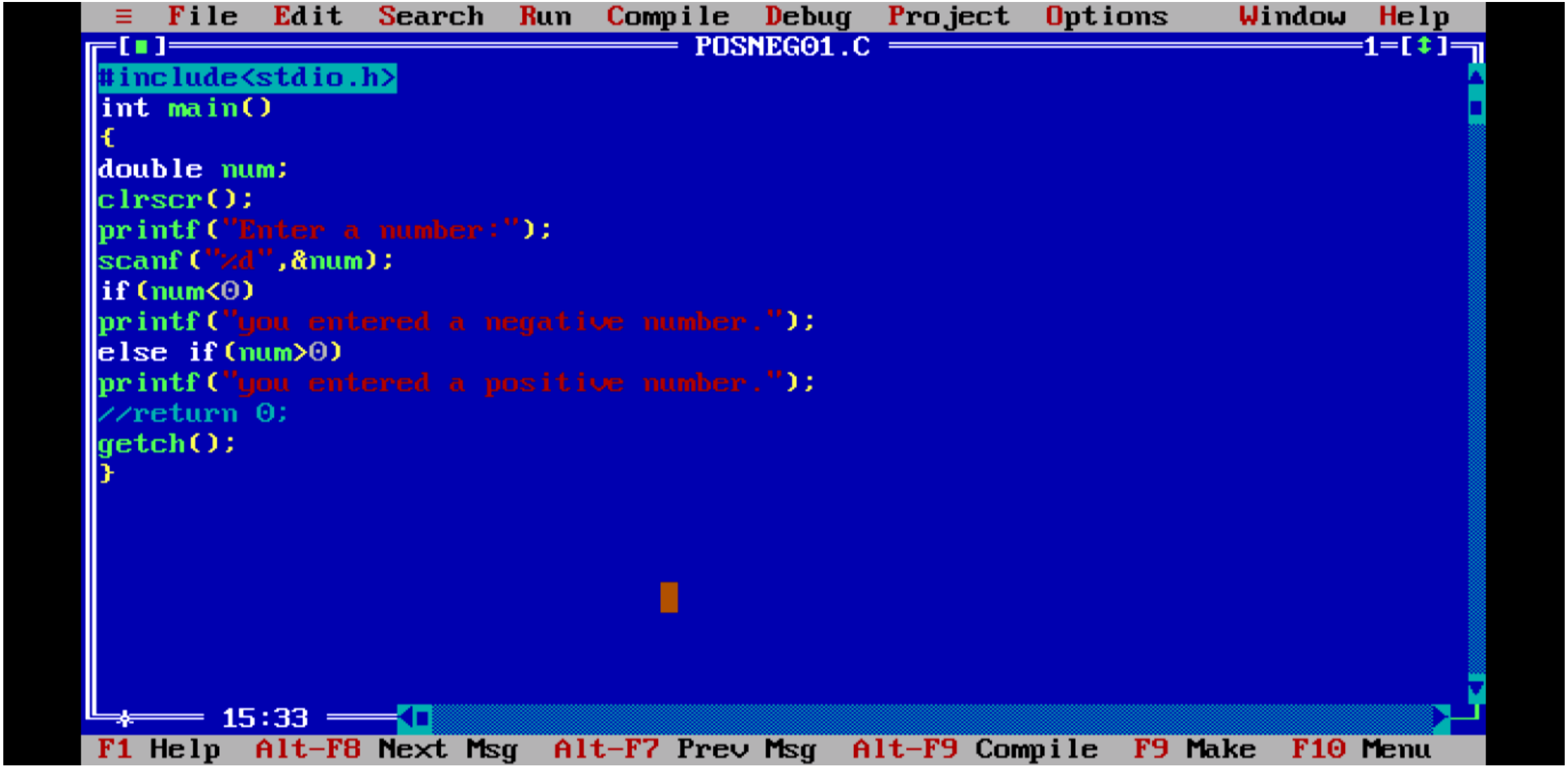
VOTING:


File Edit Search Run Compile Debug Project Options Window Help
VOTING02.C
#include<stdio.h>
#include<conio.h>
void main()
{
int age;
clrscr();
printf("Enter the age of a person:");
scanf("%d",&age);
if(age<17)
printf("\n person is not eligible for voting");
else if(age>=18)
printf("\n person is eligible for voting");
getch();
}
14:2
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu

```
Enter the age of a person:16

 person is not eligible for voting_
```

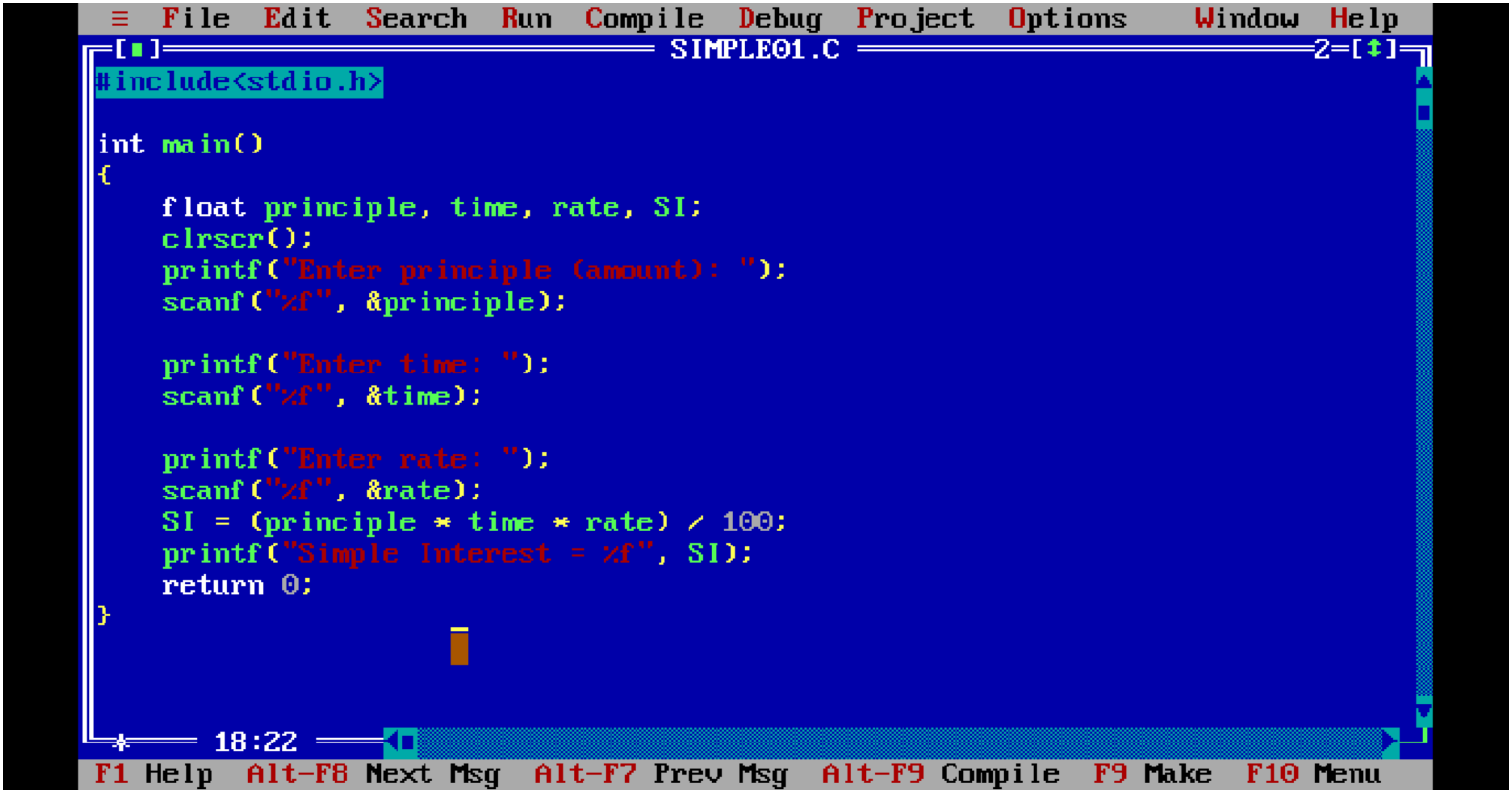
```
Enter the age of a person:19

 person is eligible for voting_
```

NEGATIVE NUMBER:



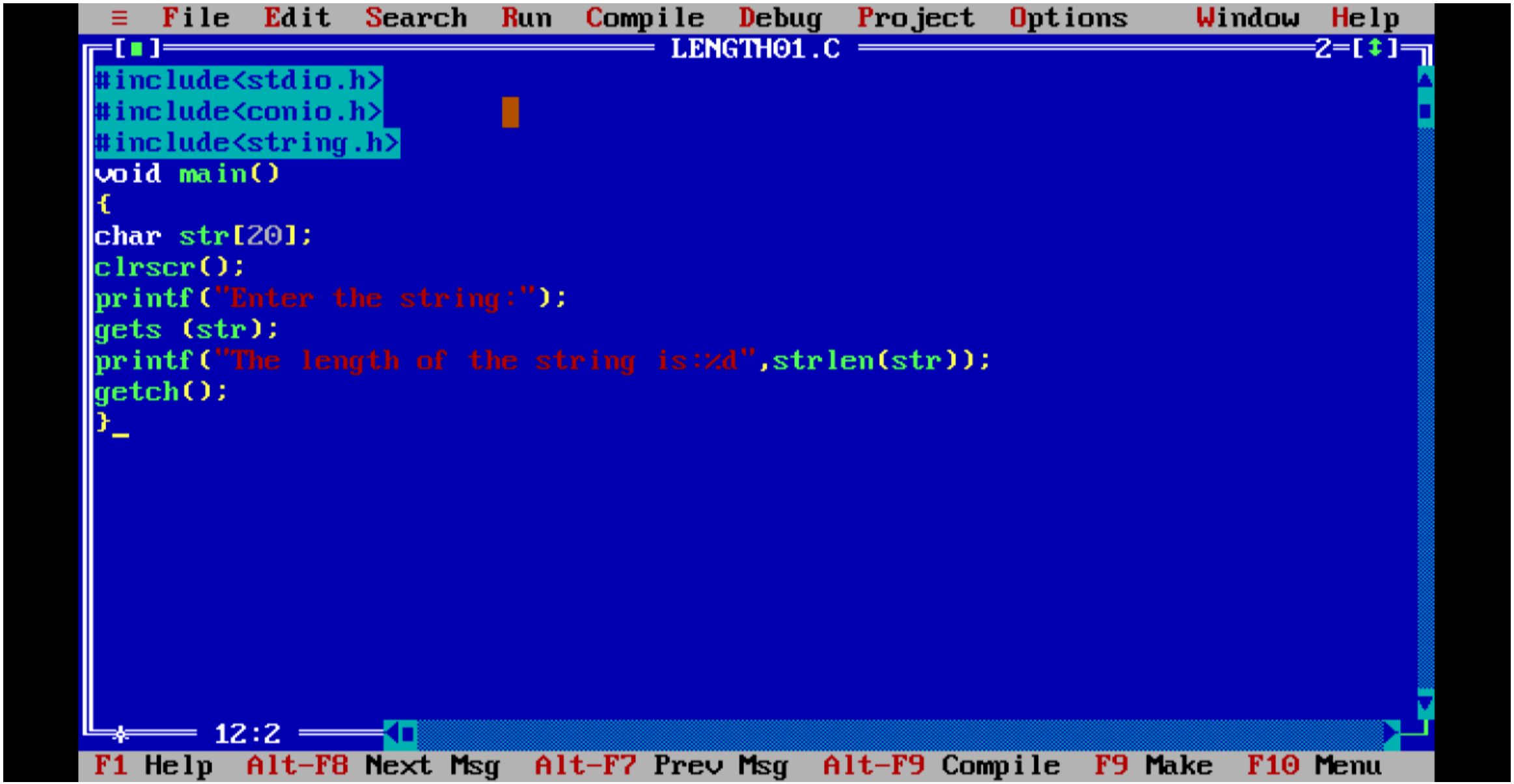
```
Enter a number:7
you entered a negative number._
```

SIMPLE INTEREST:



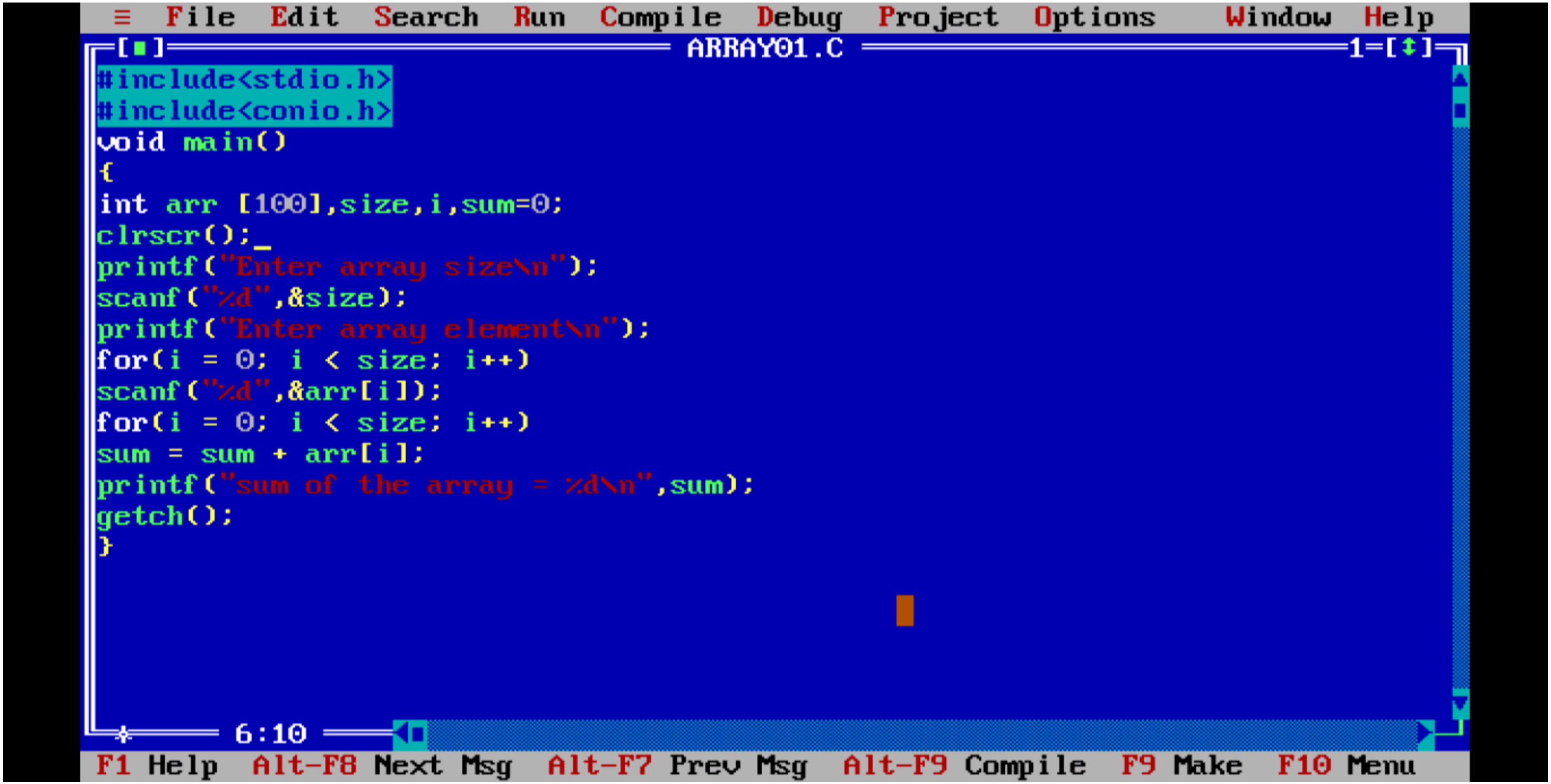
```
Enter principle (amount): 2.1
Enter time: 3.1
Enter rate: 4.2
Simple Interest = 0.273420
```

LENGTH OF A STRING:



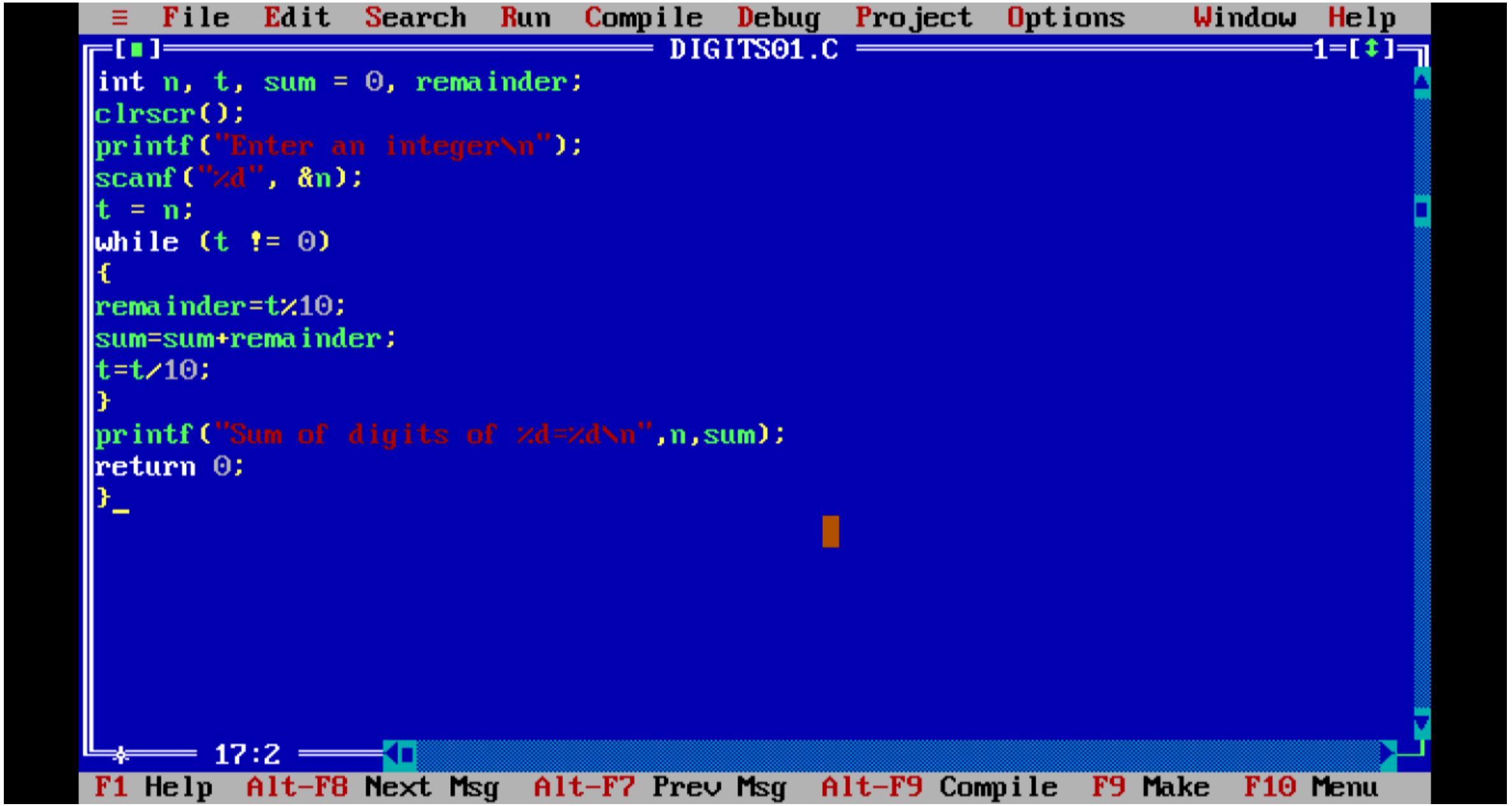
```
Enter the string:pradesh guru
The length of the string is:12
```

SUM OF ELEMENTS IN AN ARRAY:

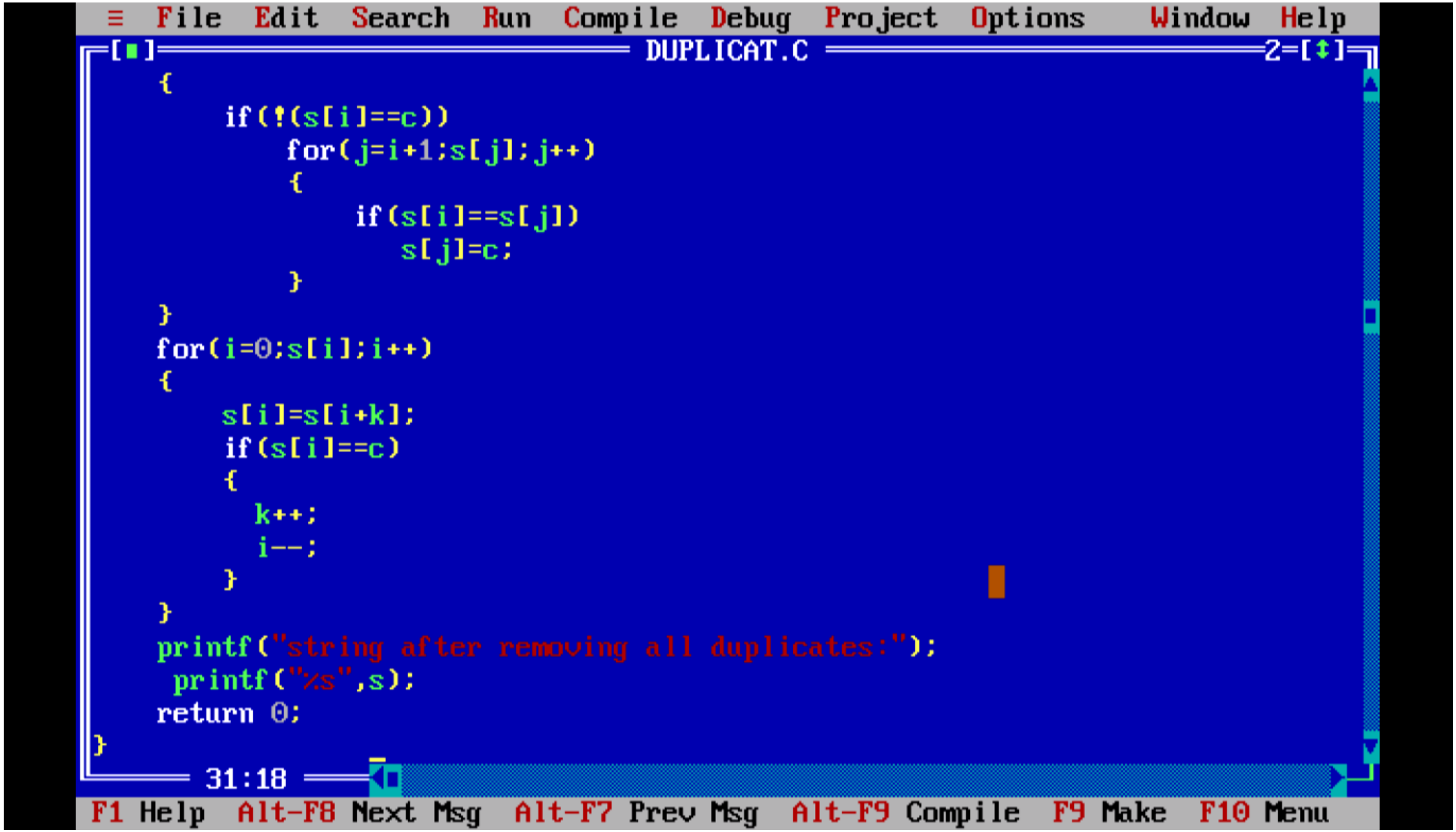


```
Enter array size
4
Enter array element
5 6 3 8
sum of the array = 22
```

SUM OF DIGITS:

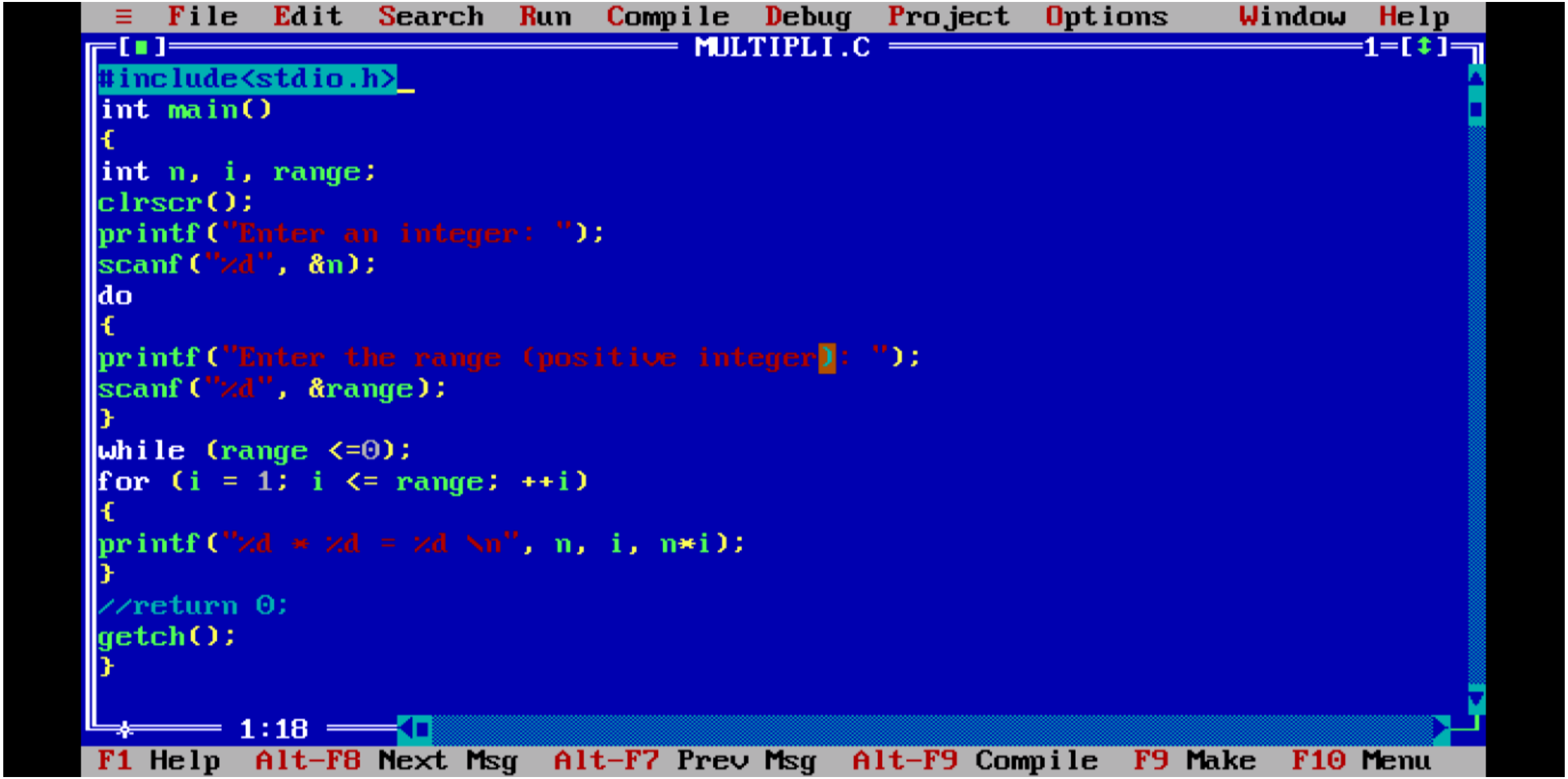


```
Enter an integer
143
Sum of digits of 143=8
```


File Edit Search Run Compile Debug Project Options Window Help
DUPLICAT.C
{
if(!(s[i]==c))
for(j=i+1;s[j];j++)
{
if(s[i]==s[j])
s[j]=c;
}
}
for(i=0;s[i];i++)
{
s[i]=s[i+k];
if(s[i]==c)
{
k++;
i--;
}
}
printf("string after removing all duplicates:");
printf("%s",s);
return 0;
}
31:18
F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu

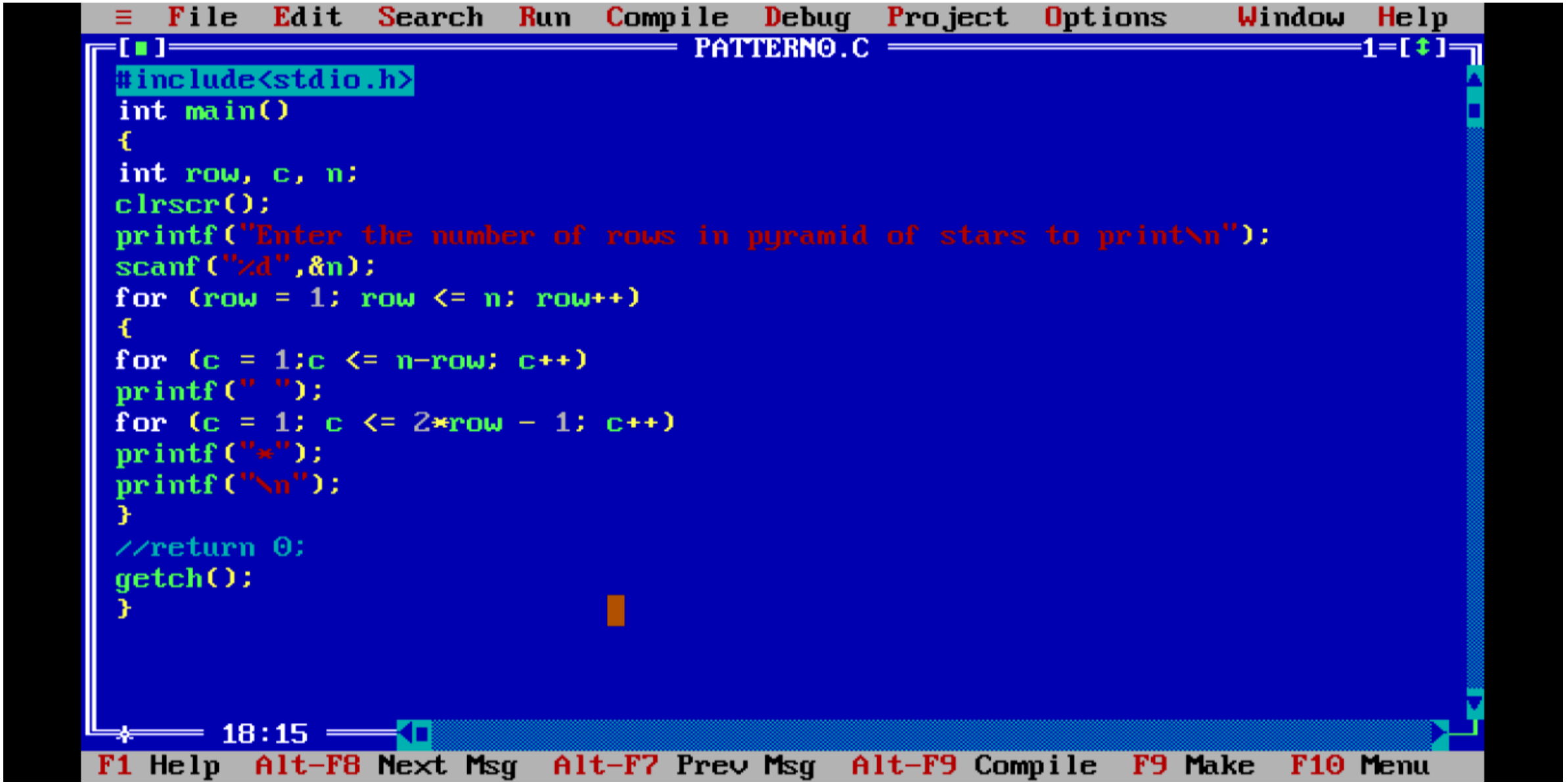
```
Enter the string :abacdce
string after removing all duplicates:abcde
```

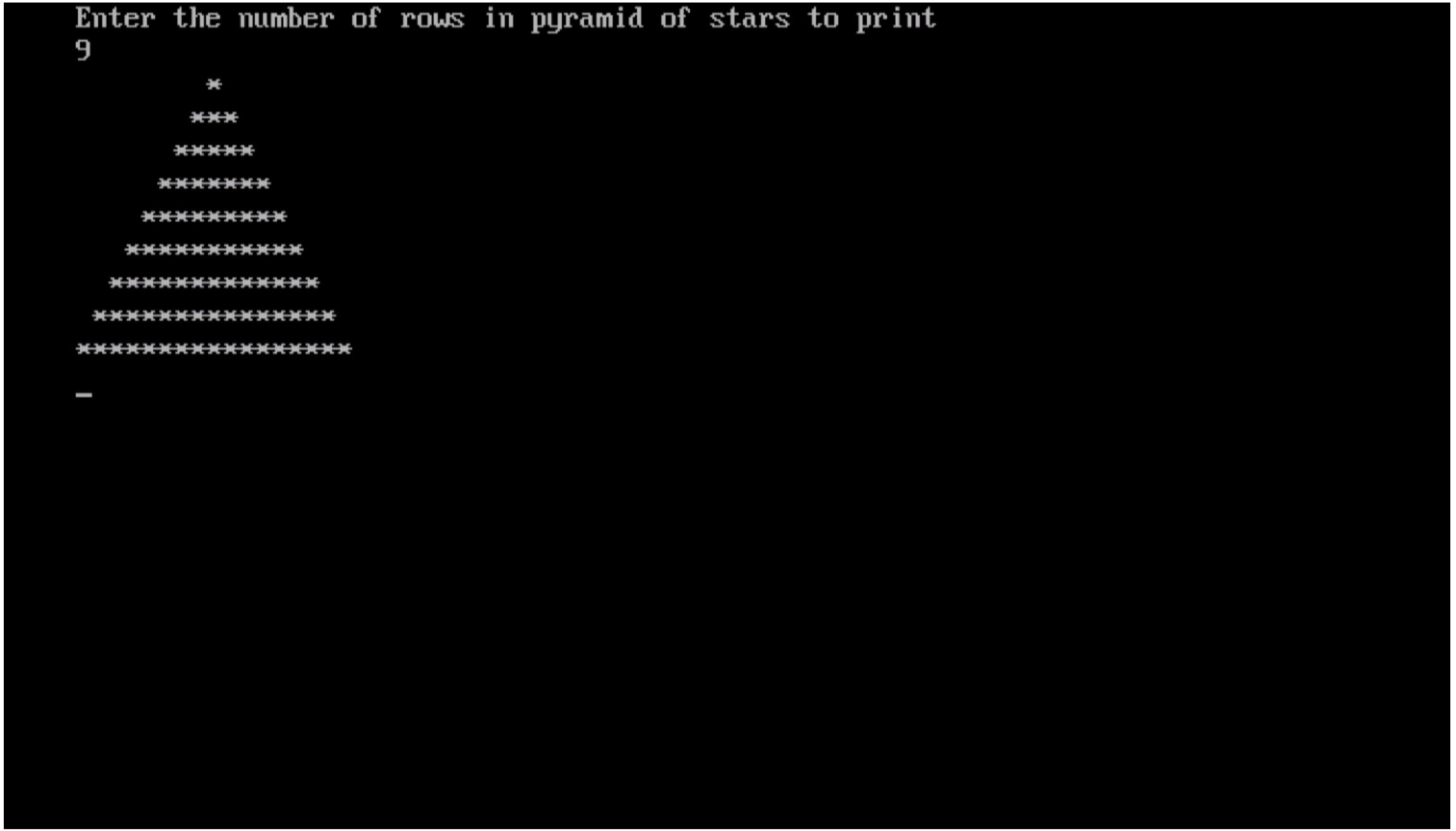
MULTIPLICATION TABLE:



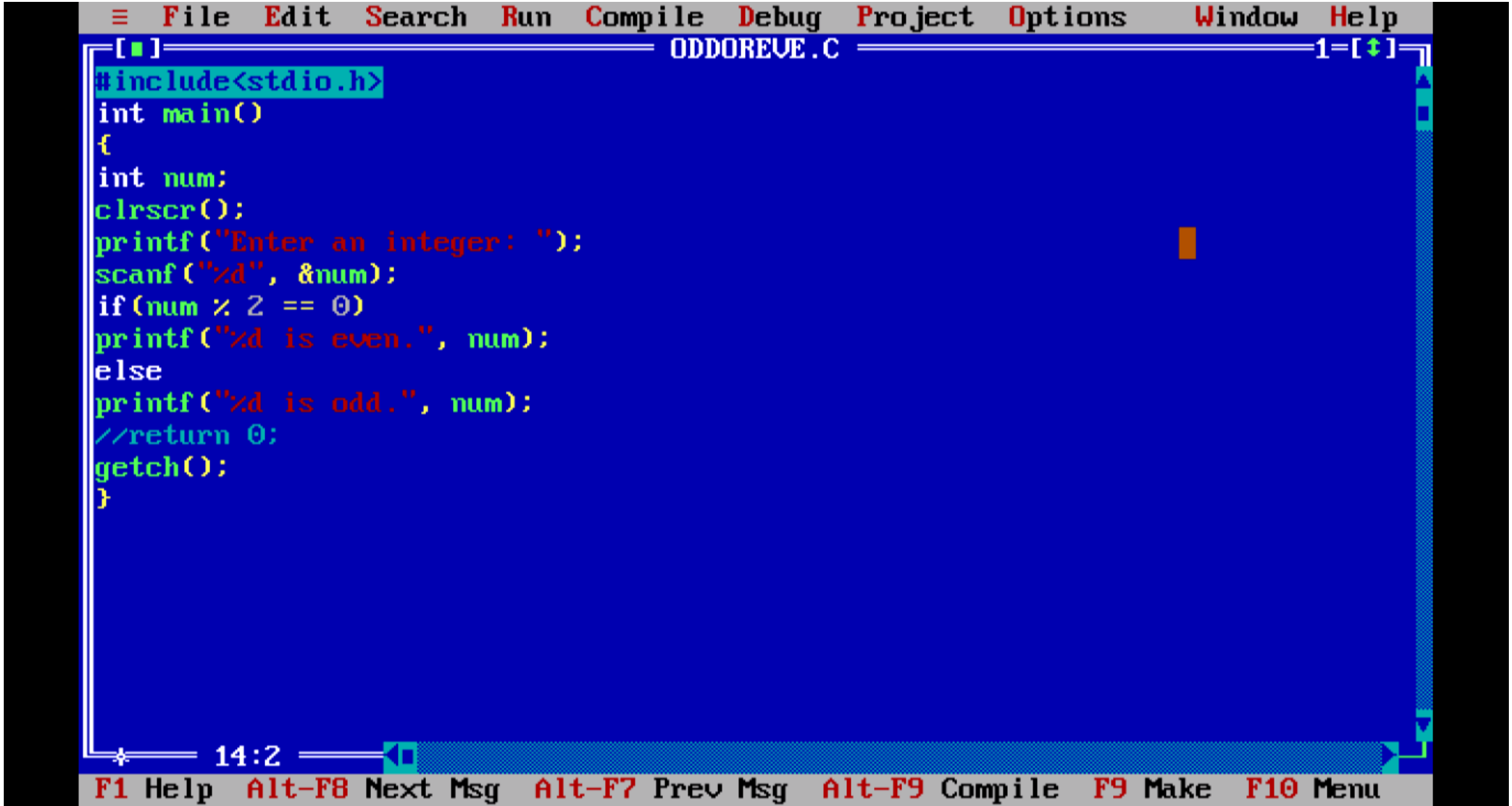
```
Enter an integer: 9
Enter the range (positive integer): 10
9 * 1 = 9
9 * 2 = 18
9 * 3 = 27
9 * 4 = 36
9 * 5 = 45
9 * 6 = 54
9 * 7 = 63
9 * 8 = 72
9 * 9 = 81
9 * 10 = 90
```

PATTERN:


File Edit Search Run Compile Debug Project Options Window Help
PATTERN0.C
#include<stdio.h>
int main()
{
int row, c, n;
clrscr();
printf("Enter the number of rows in pyramid of stars to print\n");
scanf("%d",&n);
for (row = 1; row <= n; row++)
{
for (c = 1;c <= n-row; c++)
printf(" ");
for (c = 1; c <= 2*row - 1; c++)
printf("*");
printf("\n");
}
//return 0;
getch();
}
18:15
F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu


Enter the number of rows in pyramid of stars to print
9
*
***
*****
****
****
****
****
****
****

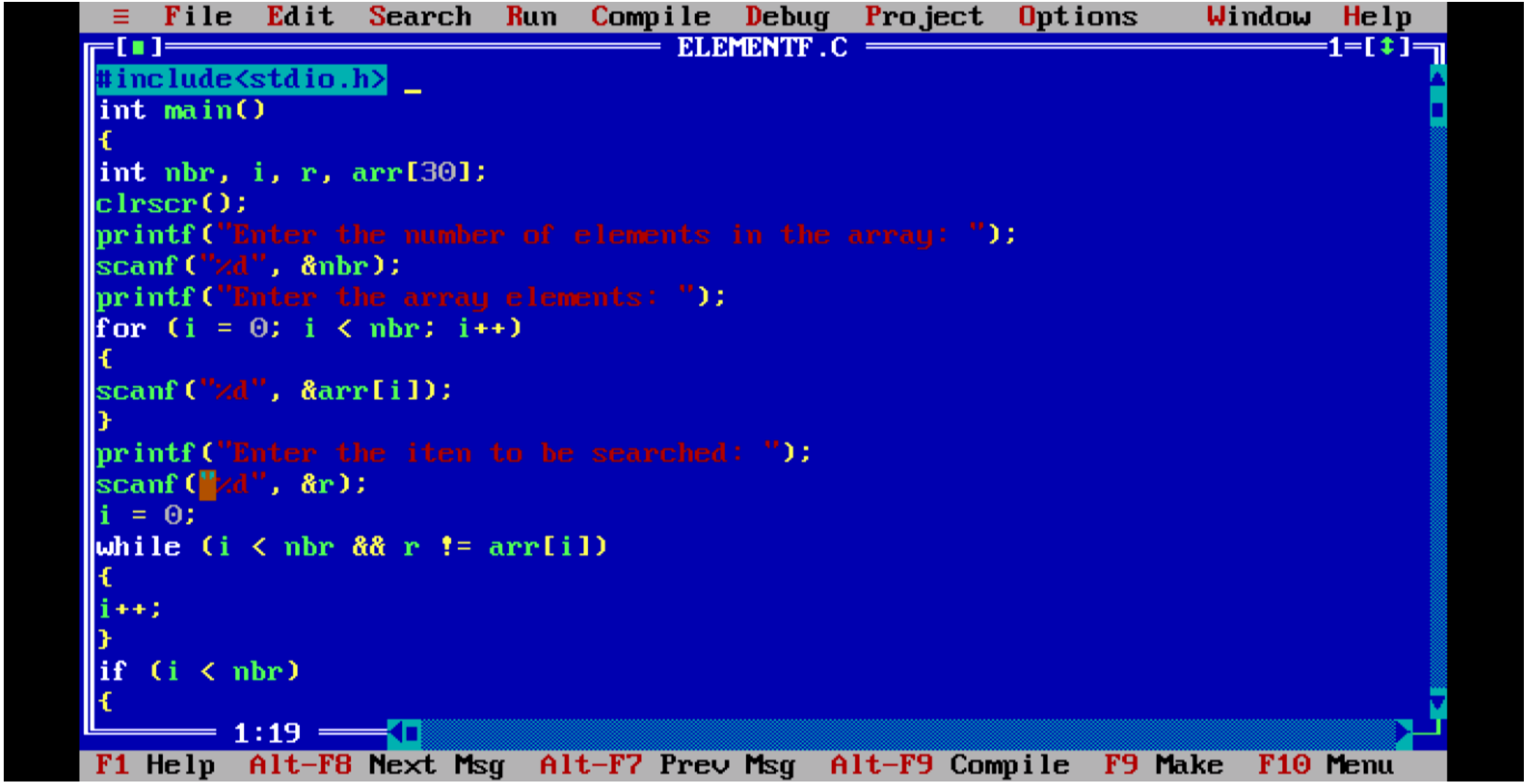
ODD OR EVEN:

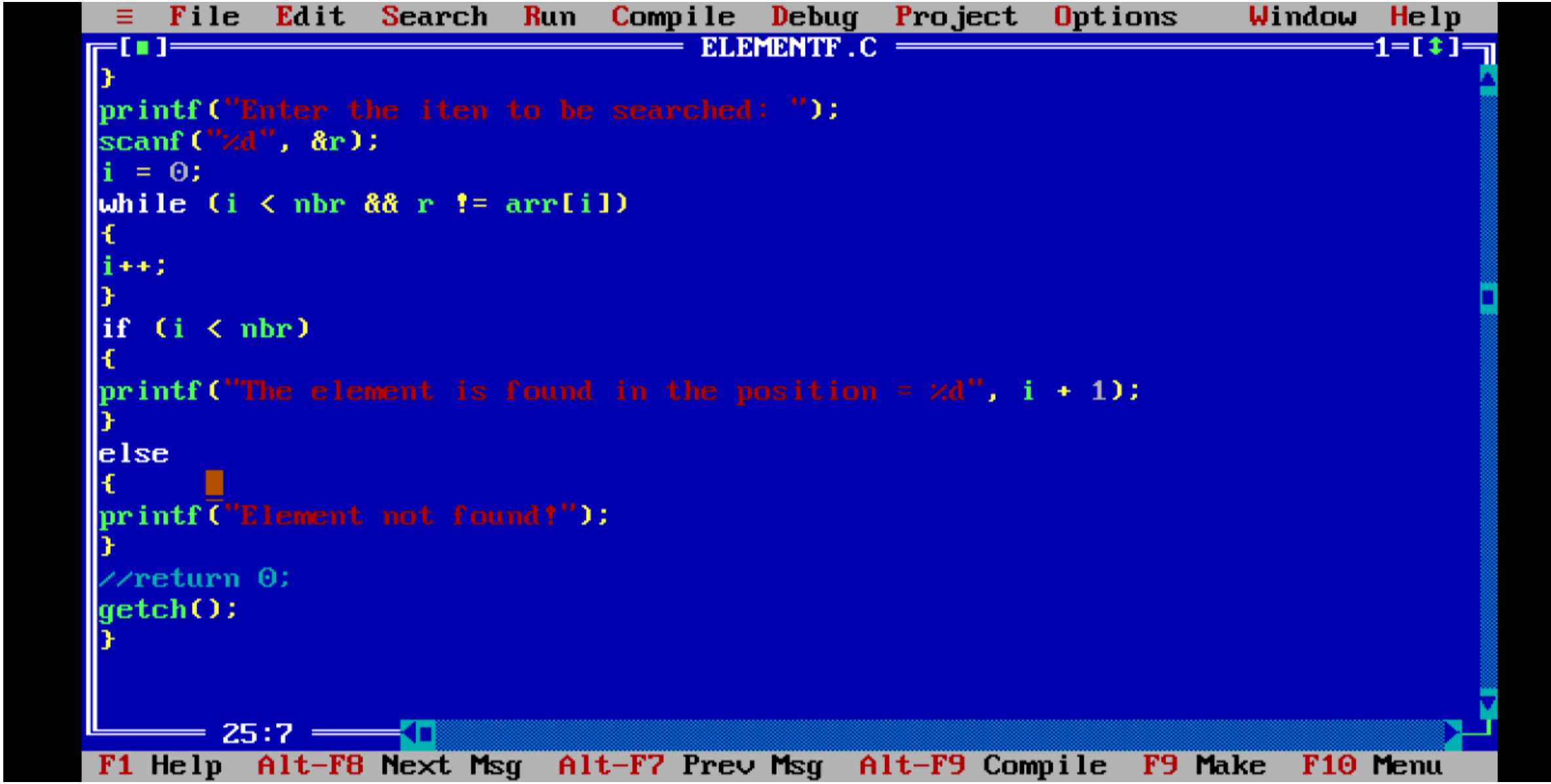

File Edit Search Run Compile Debug Project Options Window Help
ODDOREVE.C
#include<stdio.h>
int main()
{
int num;
clrscr();
printf("Enter an integer: ");
scanf("%d", &num);
if(num % 2 == 0)
printf("%d is even.", num);
else
printf("%d is odd.", num);
//return 0;
getch();
}
14:2
F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu

```
Enter an integer: 5
5 is odd._
```

```
Enter an integer: 8
8 is even.
```

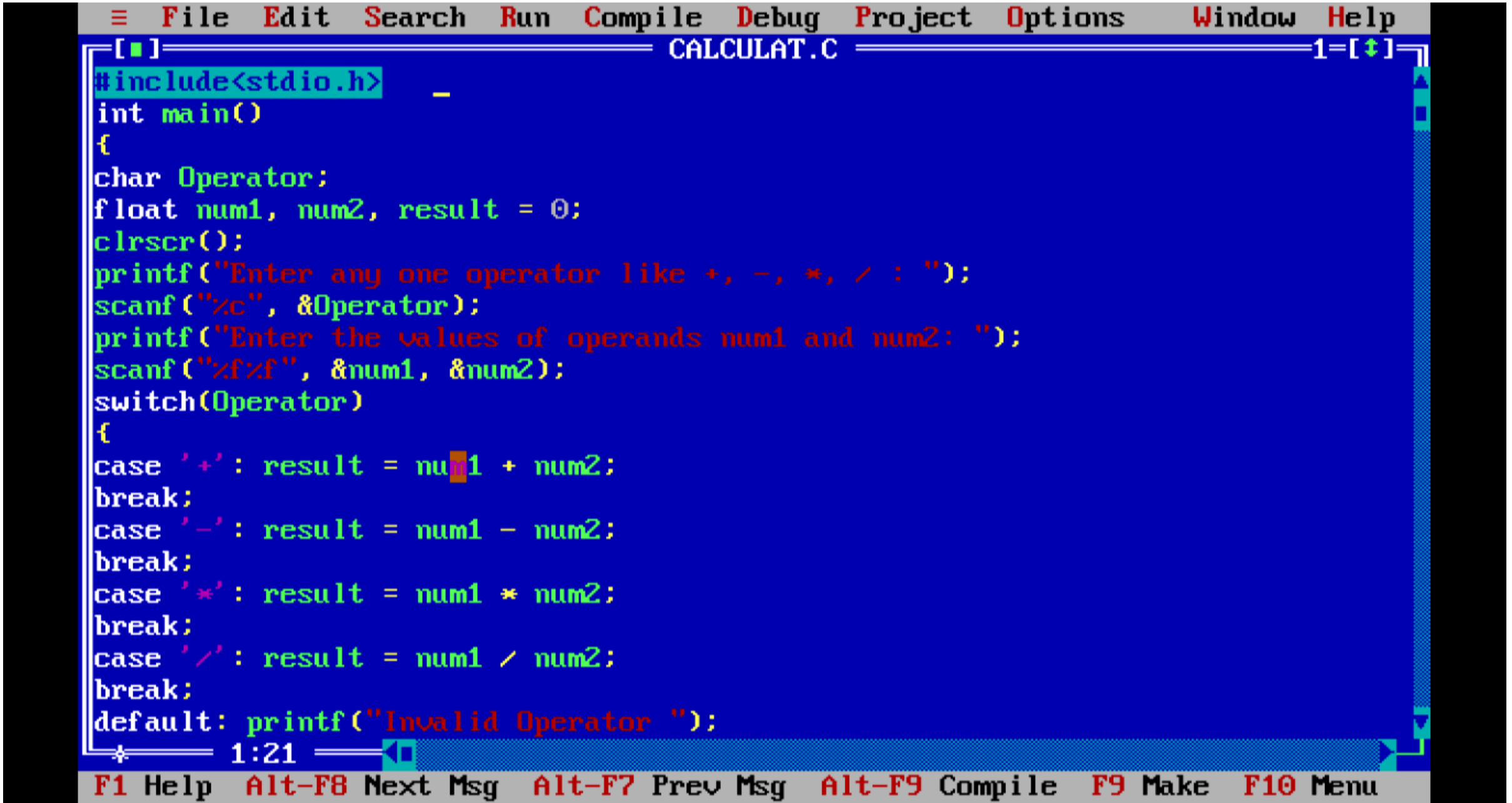
ELEMENTS FROM ARRAY AND DISPLAY ITS POSITION:

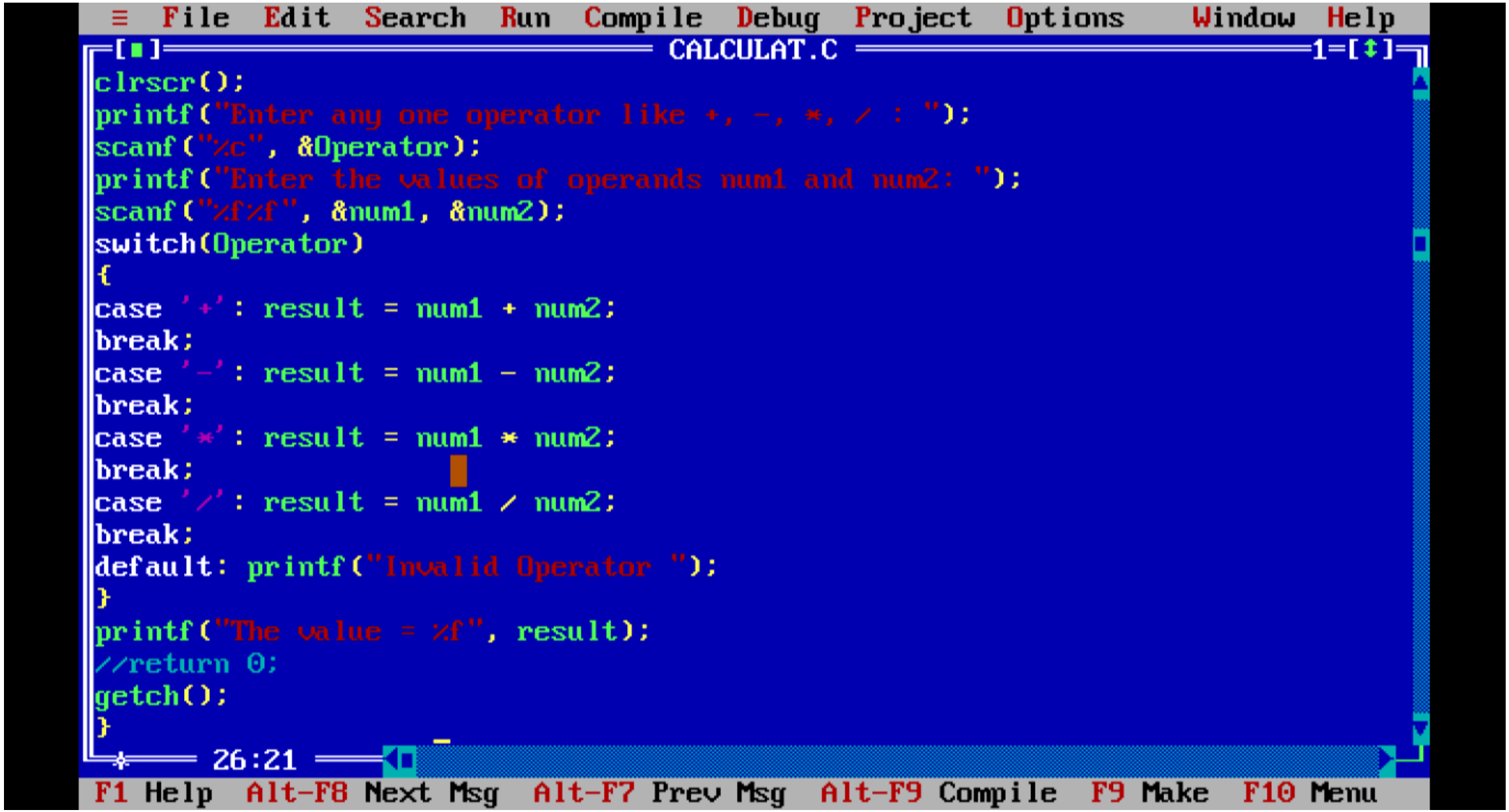



File Edit Search Run Compile Debug Project Options Window Help
ELEMENTF.C
}
printf("Enter the iten to be searched: ");
scanf("%d", &r);
i = 0;
while (i < nbr && r != arr[i])
{
i++;
}
if (i < nbr)
{
printf("The element is found in the position = %d", i + 1);
}
else
{
printf("Element not found!");
}
//return 0;
getch();
}
25:7
F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu

```
Enter the number of elements in the array: 8
Enter the array elements: 9 2 7 4 6 1 5 3
Enter the iten to be searched: 6
The element is found in the position = 5
```

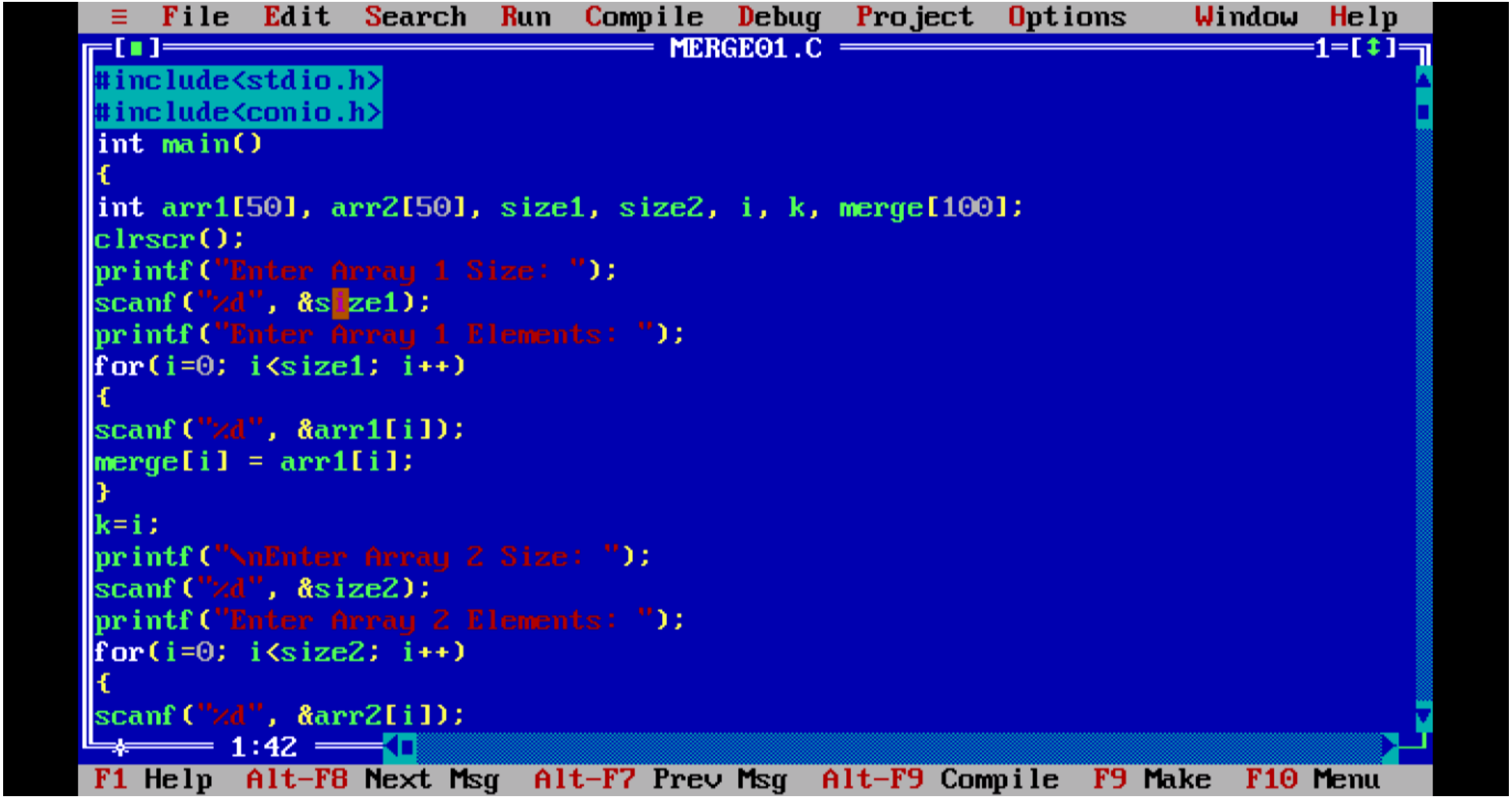
CALCULATOR:

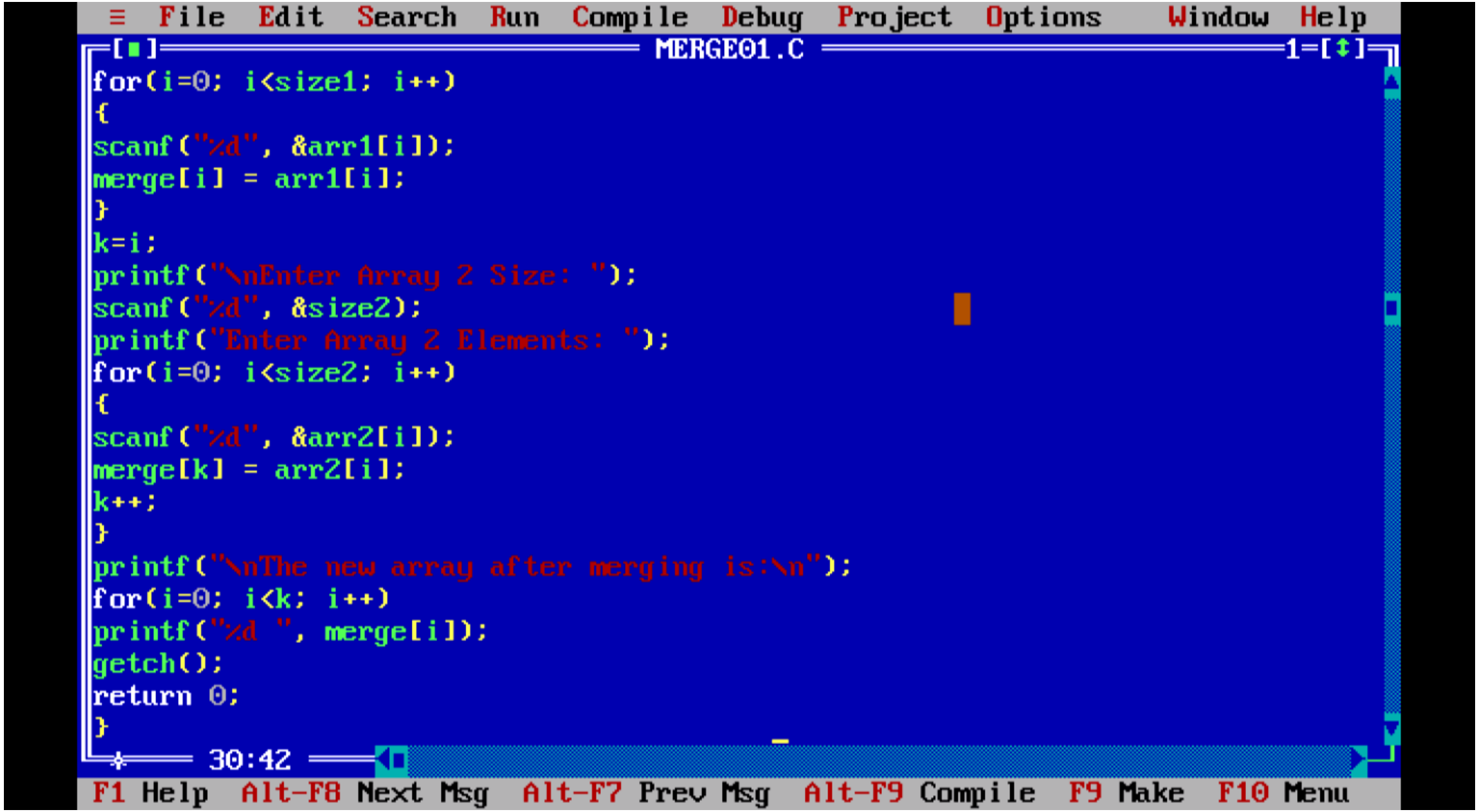

File Edit Search Run Compile Debug Project Options Window Help
CALCULAT.C
#include<stdio.h>
int main()
{
char Operator;
float num1, num2, result = 0;
clrscr();
printf("Enter any one operator like +, -, *, / : ");
scanf("%c", &Operator);
printf("Enter the values of operands num1 and num2: ");
scanf("%f%f", &num1, &num2);
switch(Operator)
{
case '+': result = num1 + num2;
break;
case '-': result = num1 - num2;
break;
case '*': result = num1 * num2;
break;
case '/': result = num1 / num2;
break;
default: printf("Invalid Operator ");
1:21
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
CALCULAT.C
clrscr();
printf("Enter any one operator like +, -, *, / : ");
scanf("%c", &Operator);
printf("Enter the values of operands num1 and num2: ");
scanf("%f%f", &num1, &num2);
switch(Operator)
{
case '+': result = num1 + num2;
break;
case '-': result = num1 - num2;
break;
case '*': result = num1 * num2;
break;
case '/': result = num1 / num2;
break;
default: printf("Invalid Operator ");
}
printf("The value = %f", result);
//return 0;
getch();
}
26:21
F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu

```
Enter any one operator like +, -, *, / : +
Enter the values of operands num1 and num2: 44 72
The value = 116.000000
```

MERGE TWO ARRAY:




File Edit Search Run Compile Debug Project Options Window Help
MERGE01.C
for(i=0; i<size1; i++)
{
scanf("%d", &arr1[i]);
merge[i] = arr1[i];
}
k=i;
printf("\nEnter Array 2 Size: ");
scanf("%d", &size2);
printf("Enter Array 2 Elements: ");
for(i=0; i<size2; i++)
{
scanf("%d", &arr2[i]);
merge[k] = arr2[i];
k++;
}
printf("\nThe new array after merging is:\n");
for(i=0; i<k; i++)
printf("%d ", merge[i]);
getch();
return 0;
}
30:42
F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu

```
Enter Array 1 Size: 4
Enter Array 1 Elements: 1
2
3
4

Enter Array 2 Size: 4
Enter Array 2 Elements: 5
6
7
8

The new array after merging is:
1 2 3 4 5 6 7 8
```