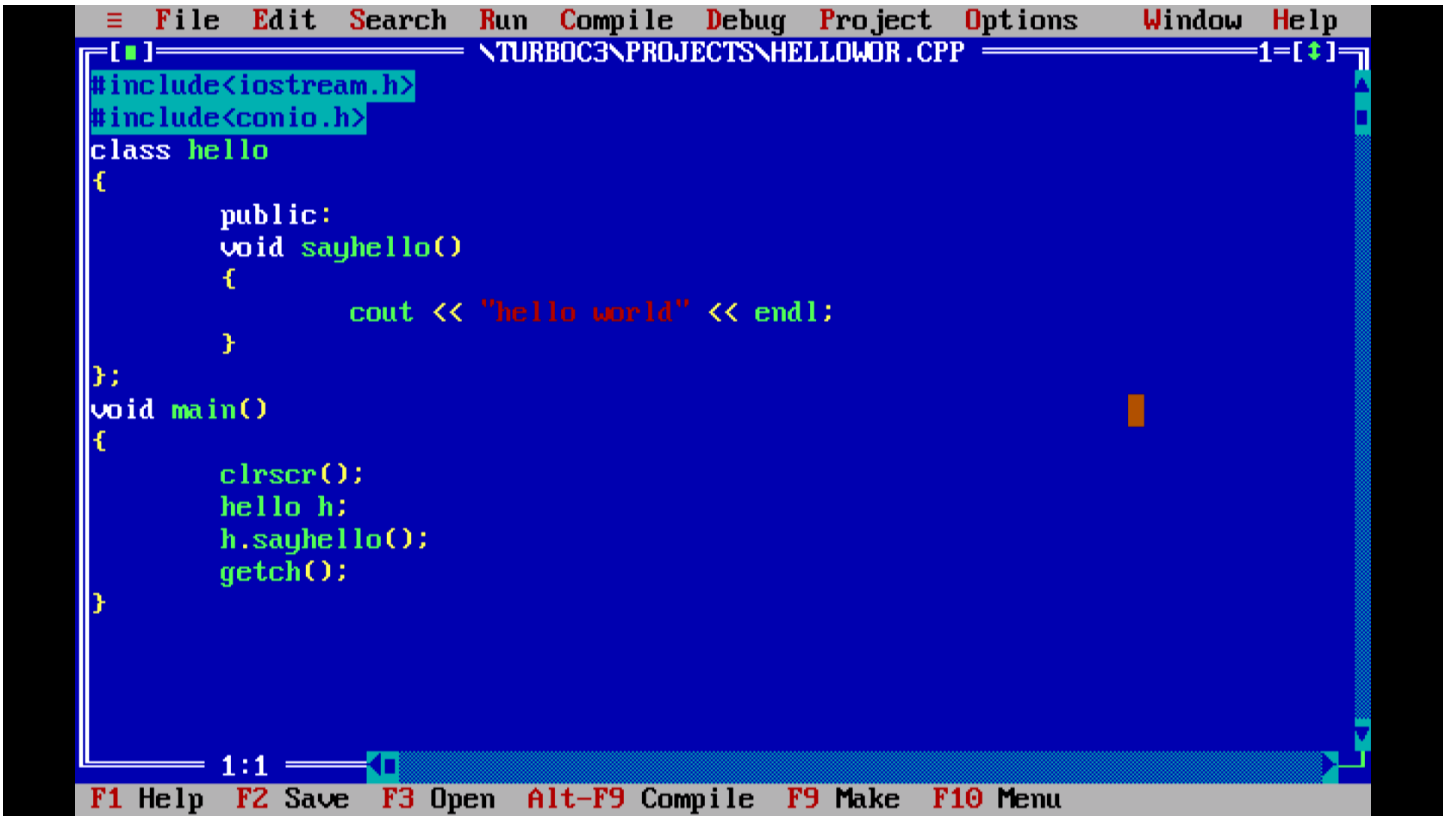
Assignment 1: OOPS Program

OOPS PROGRAM

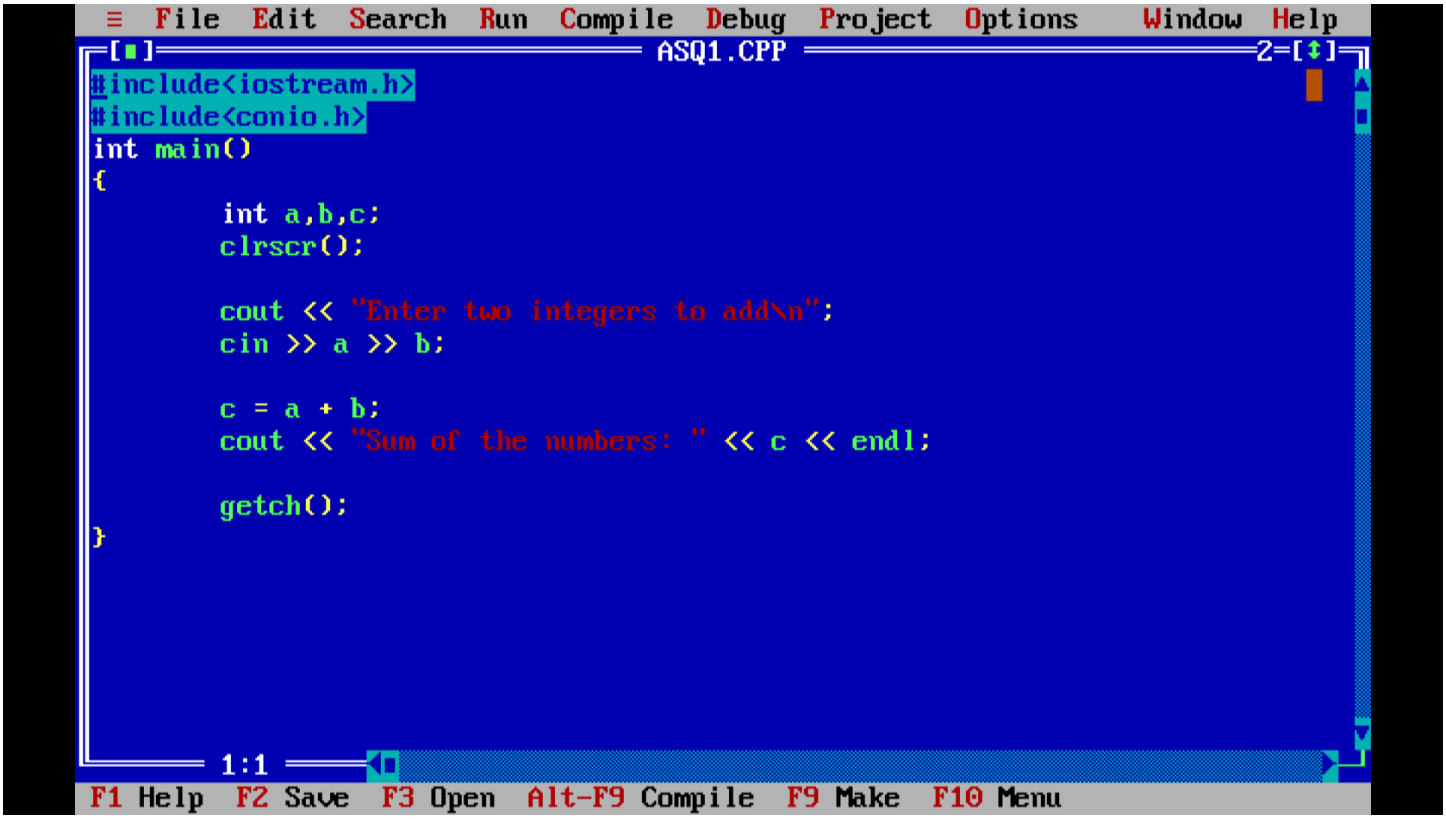
EVERYTHING IS EASY!

Nikunj Sadaliya | OOPS | 228 | 09-08-2021

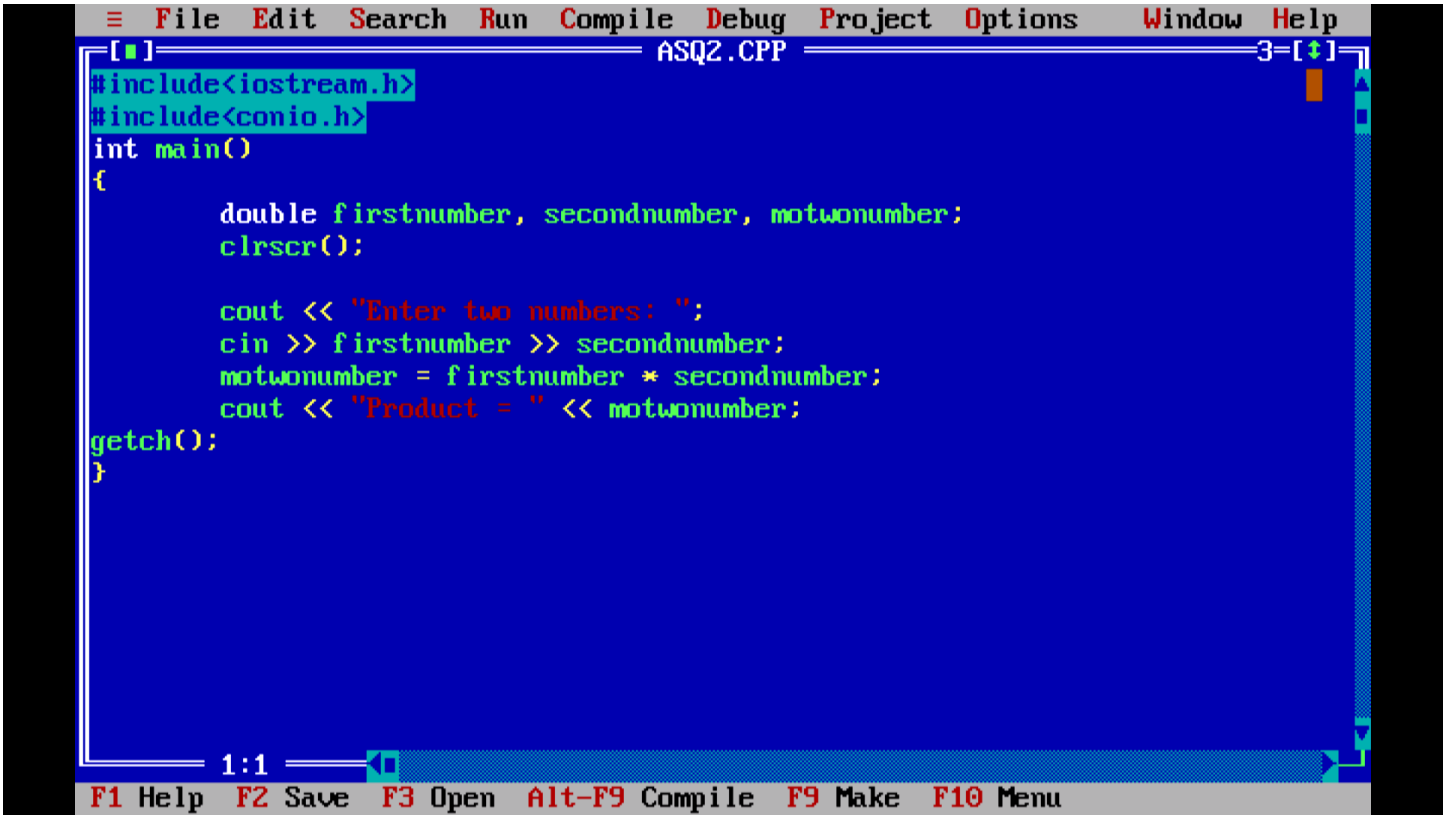
ASQ #: Hello World!



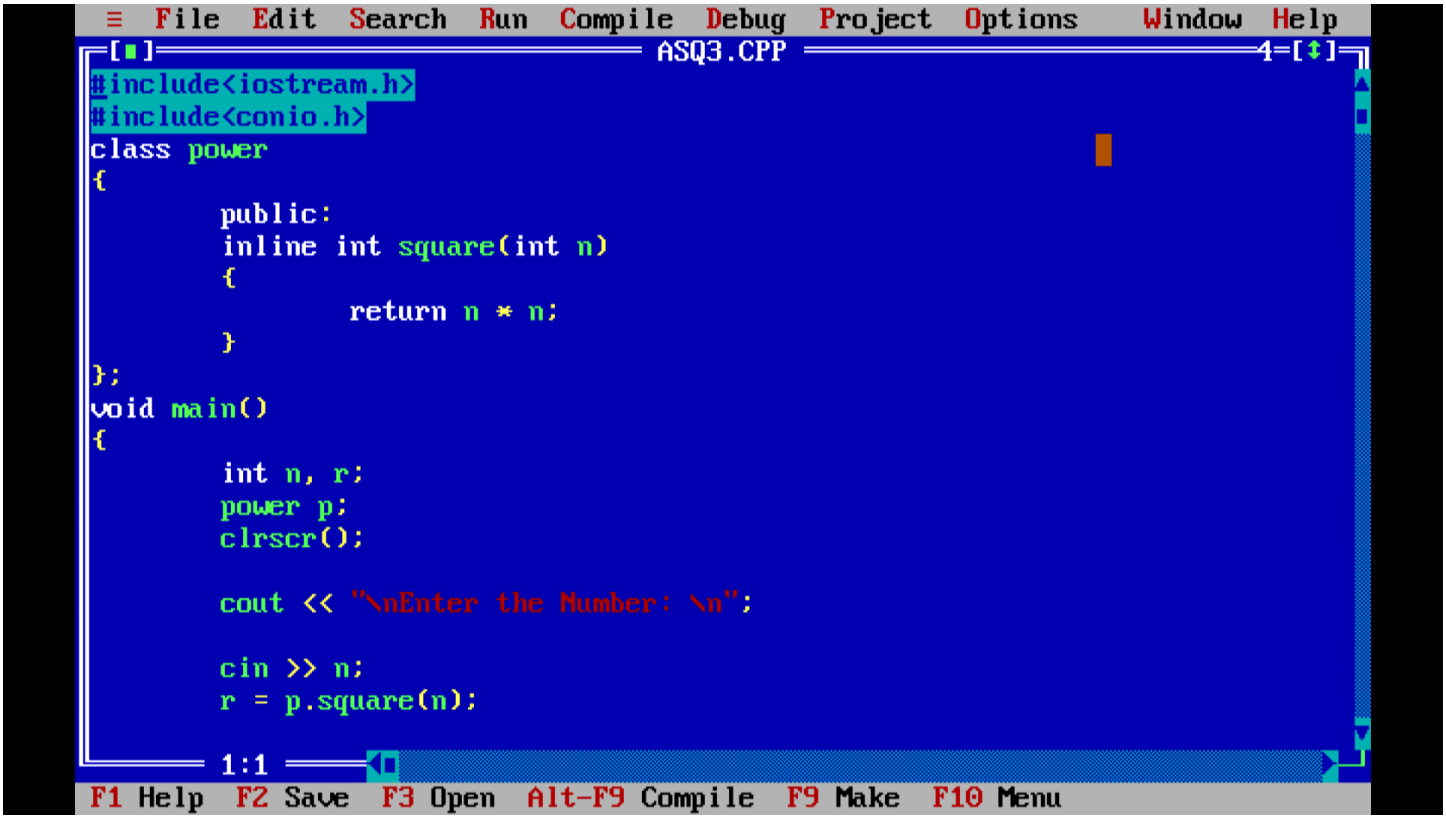
ASQ 1: Add two numbers

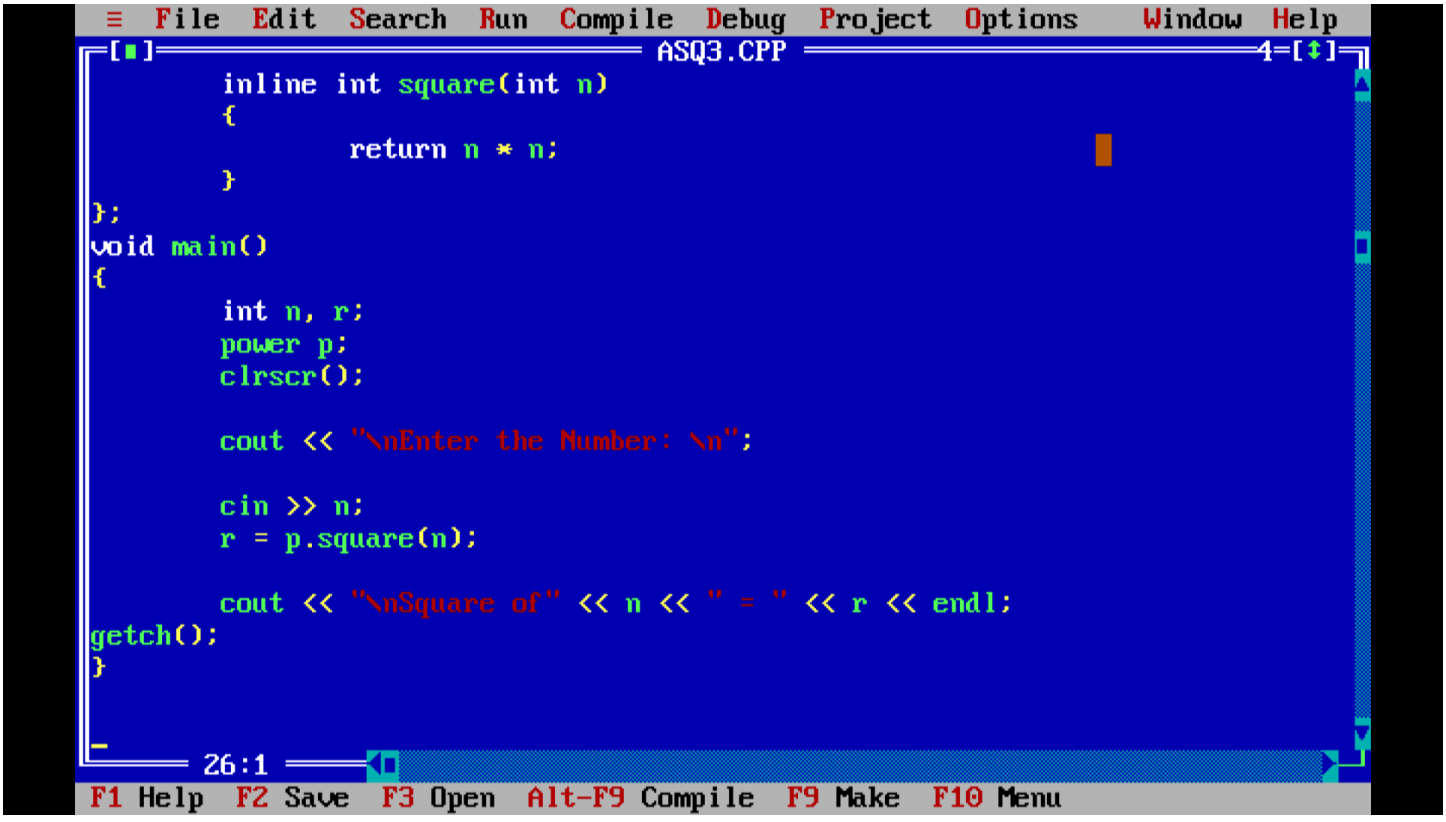


ASQ 2: Multiply two numbers



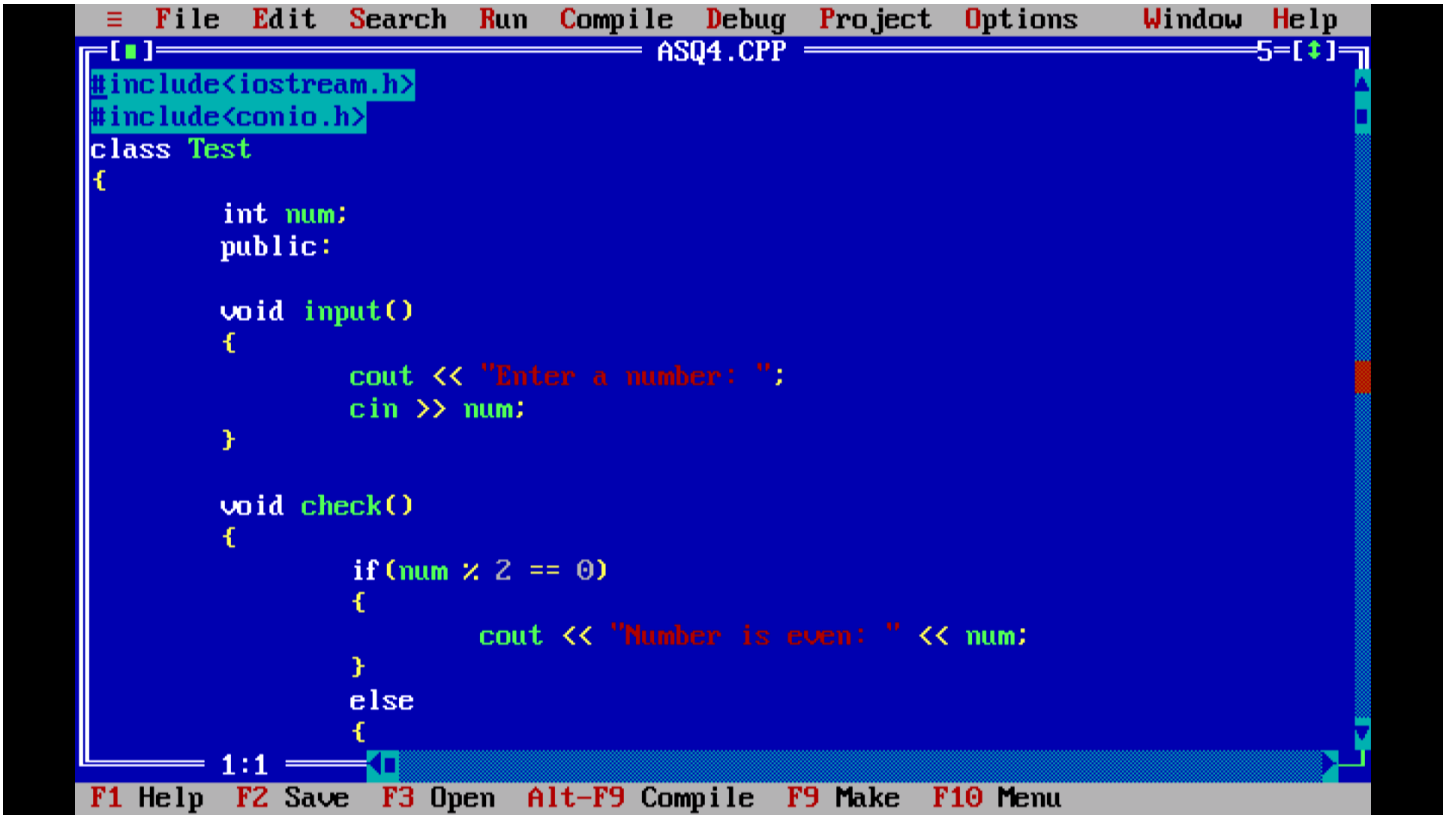
ASQ 3: Square root

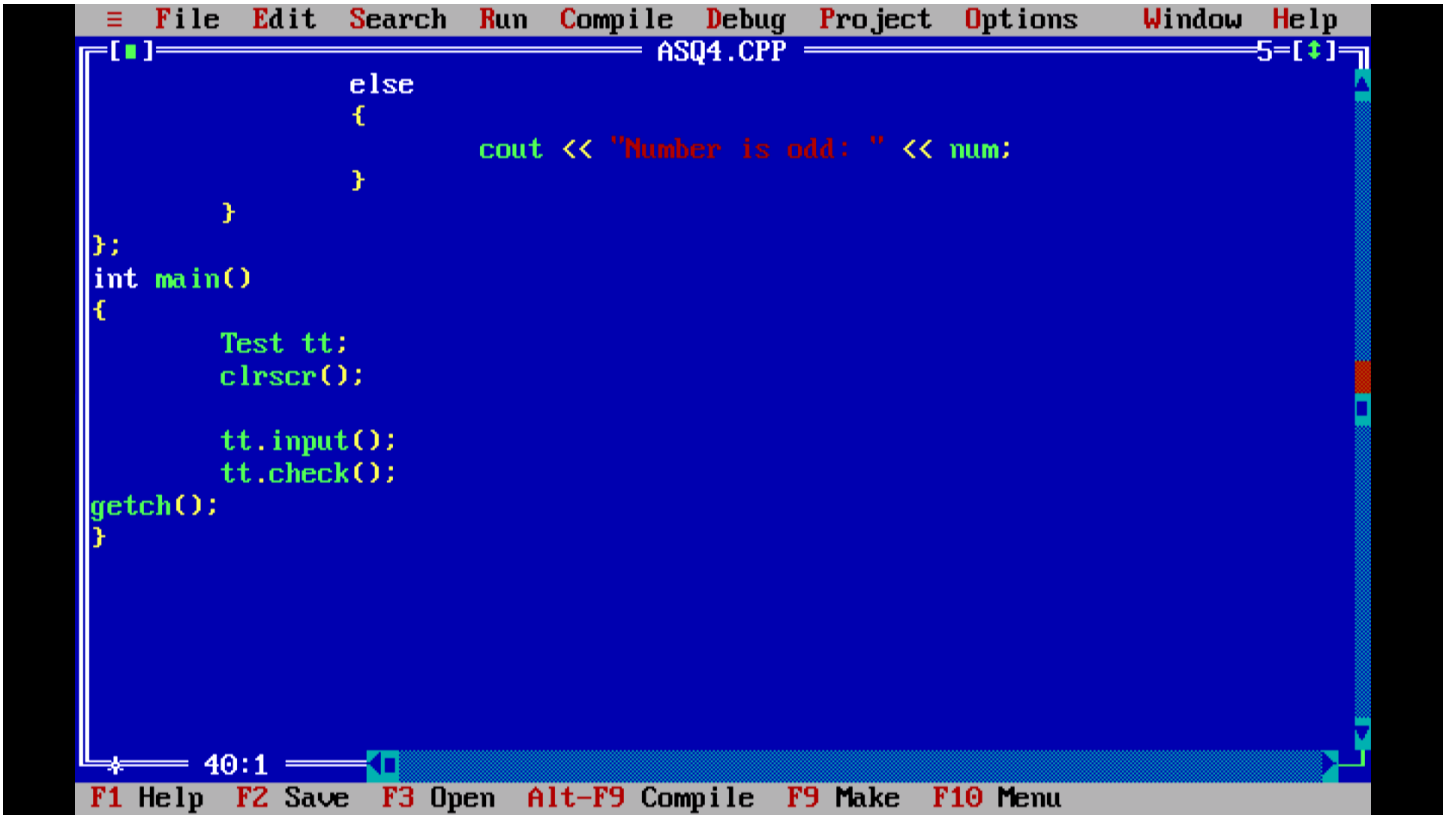




```
Enter the Number:
12

Square of12 = 144
```

ASQ 4: Odd or Even

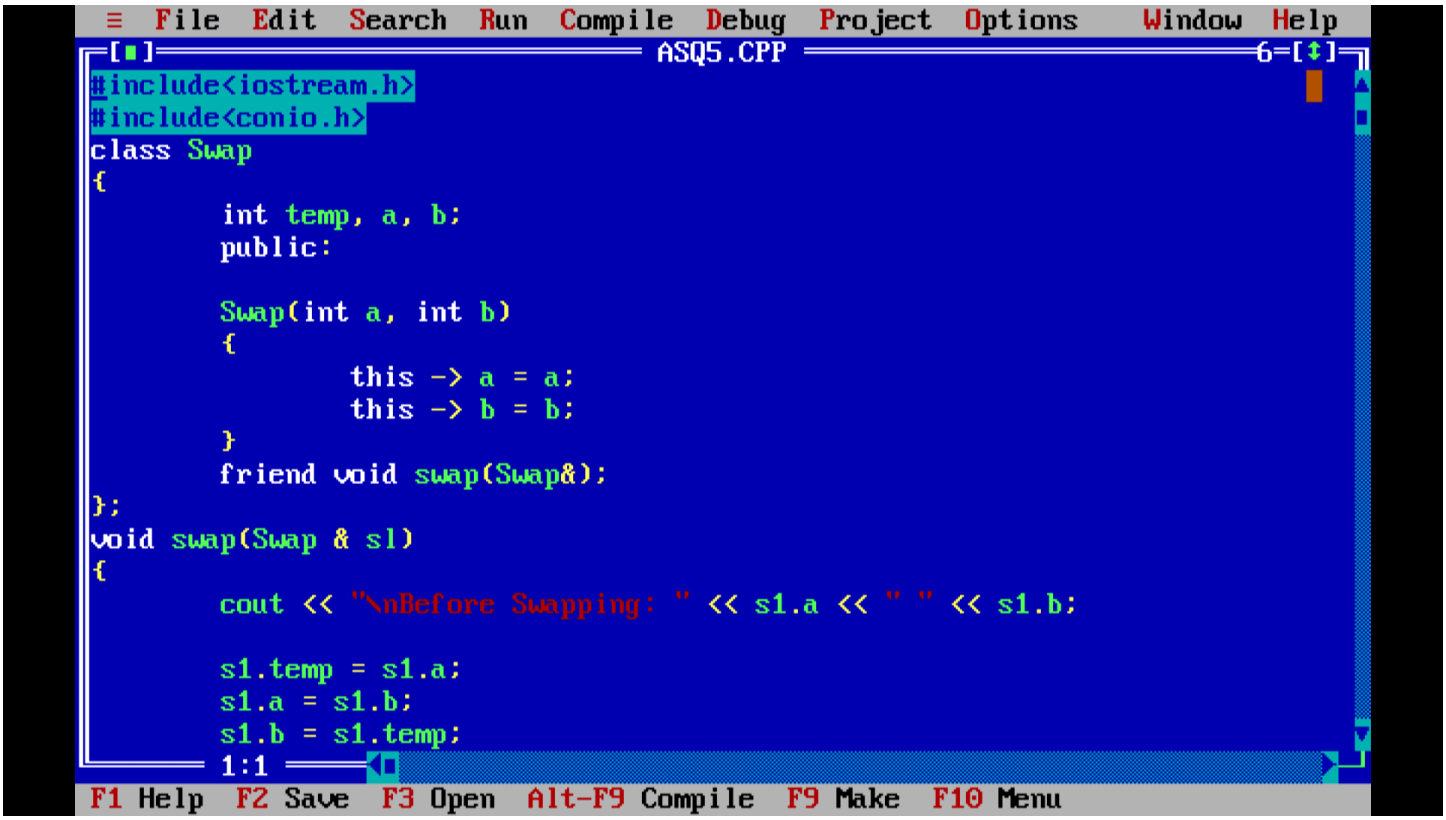


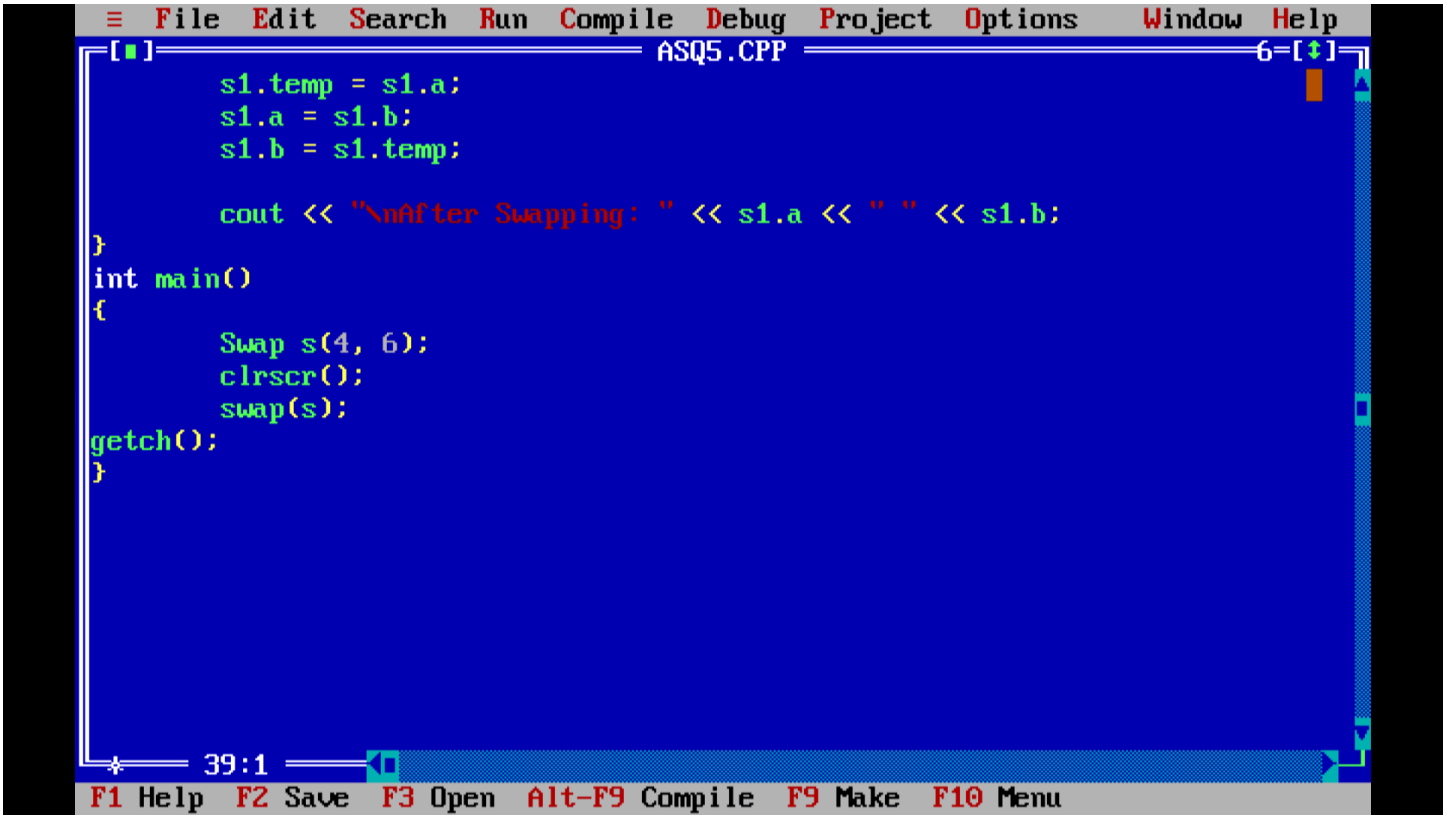


```
Enter a number: 2
Number is even: 2
```

```
Enter a number: 5
Number is odd: 5
```

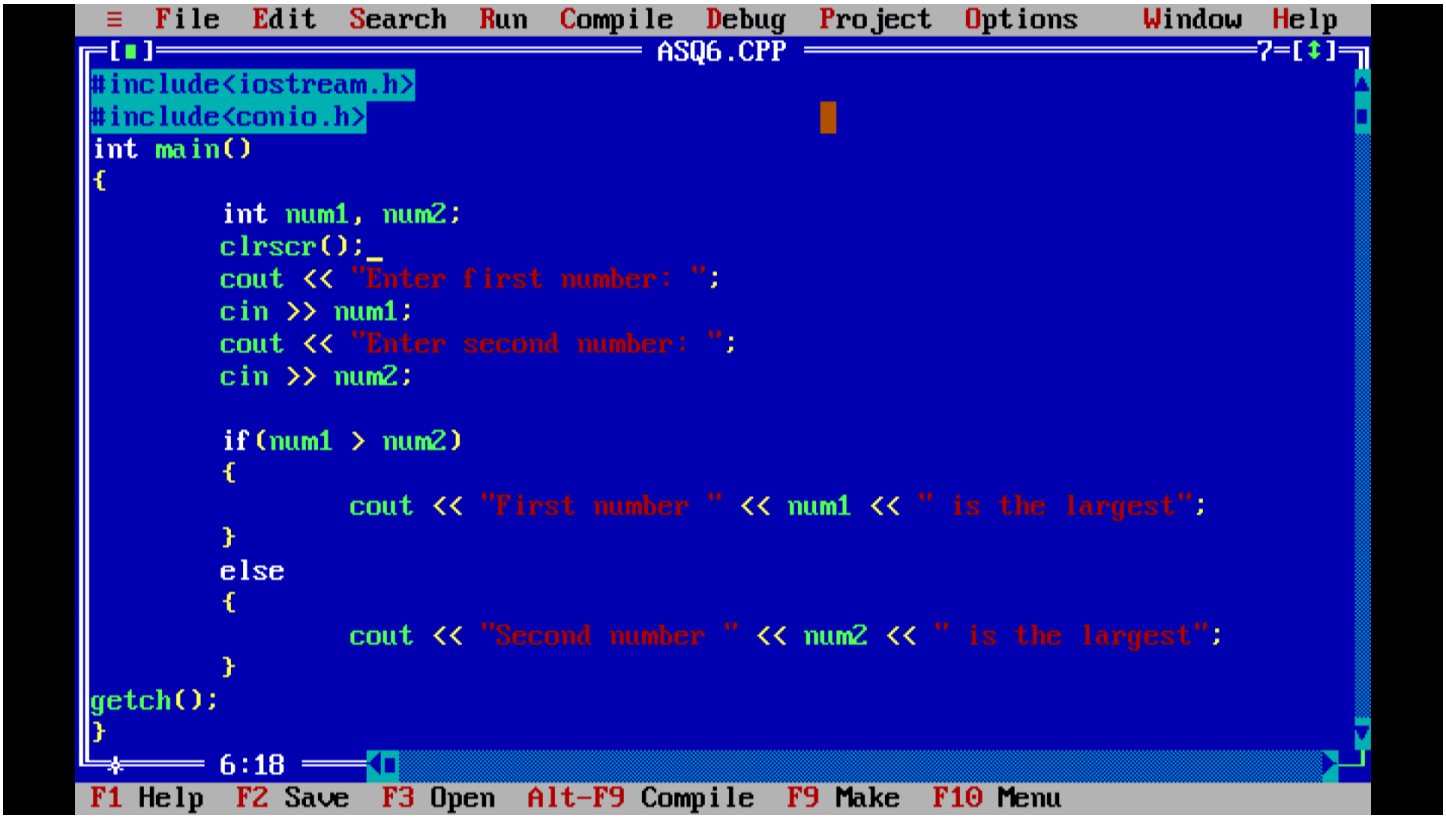
ASQ 5: Swap two numbers

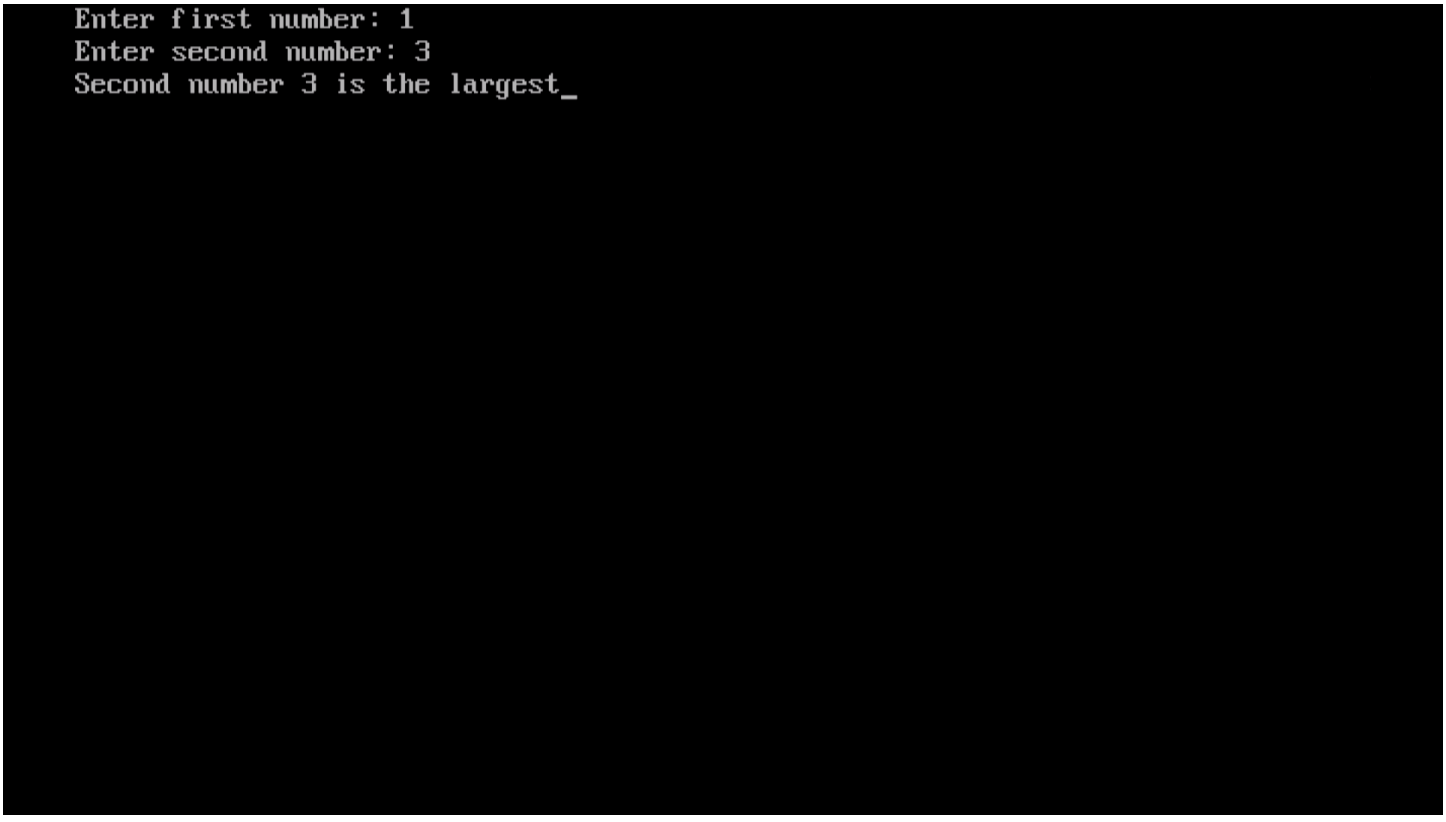




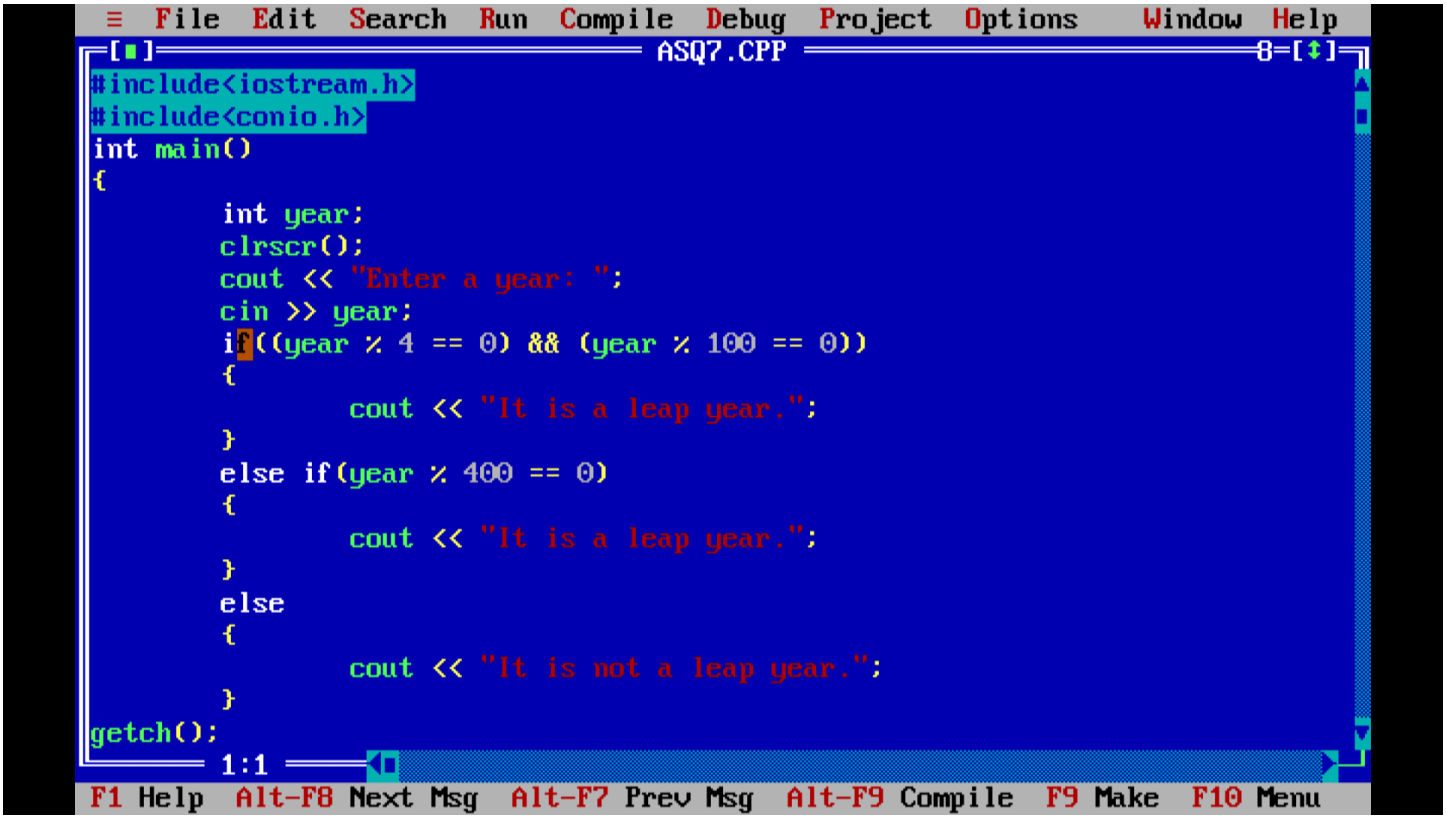
```
Before Swapping: 4 6
After Swapping: 6 4_
```

ASQ 6: Find Maximum Number between two numbers

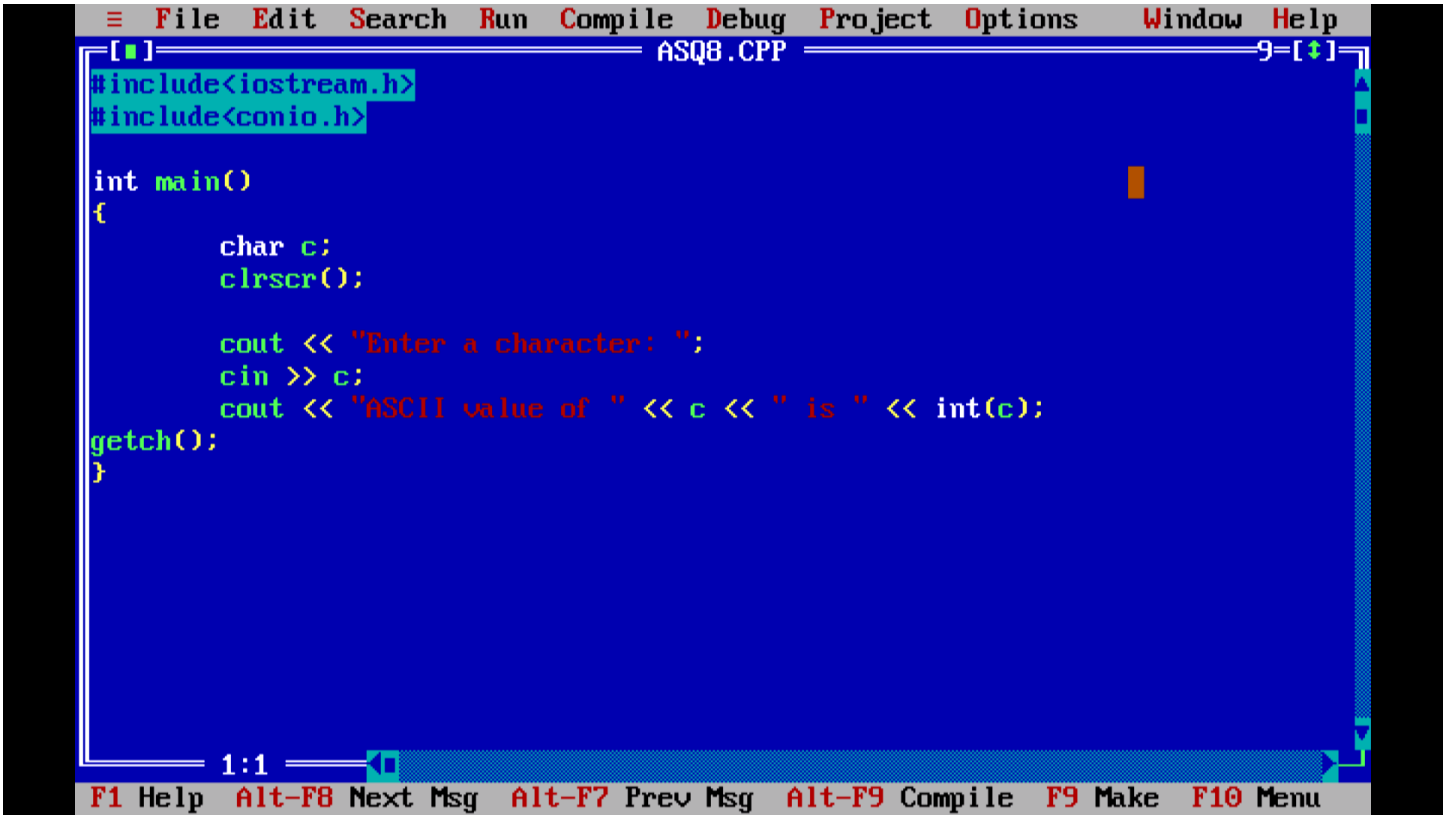




ASQ 7: Leap year



ASQ 8: ASCII value

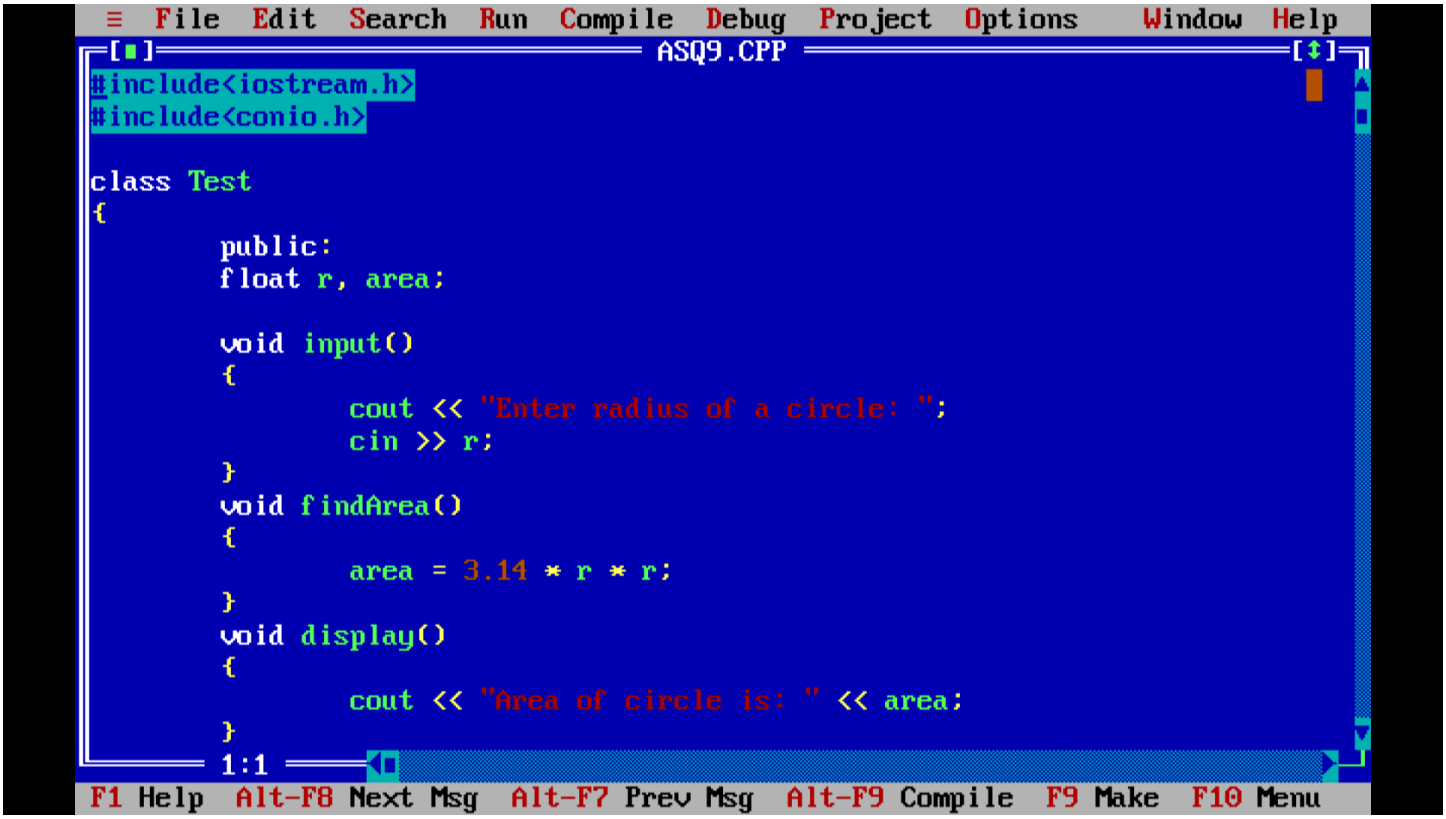


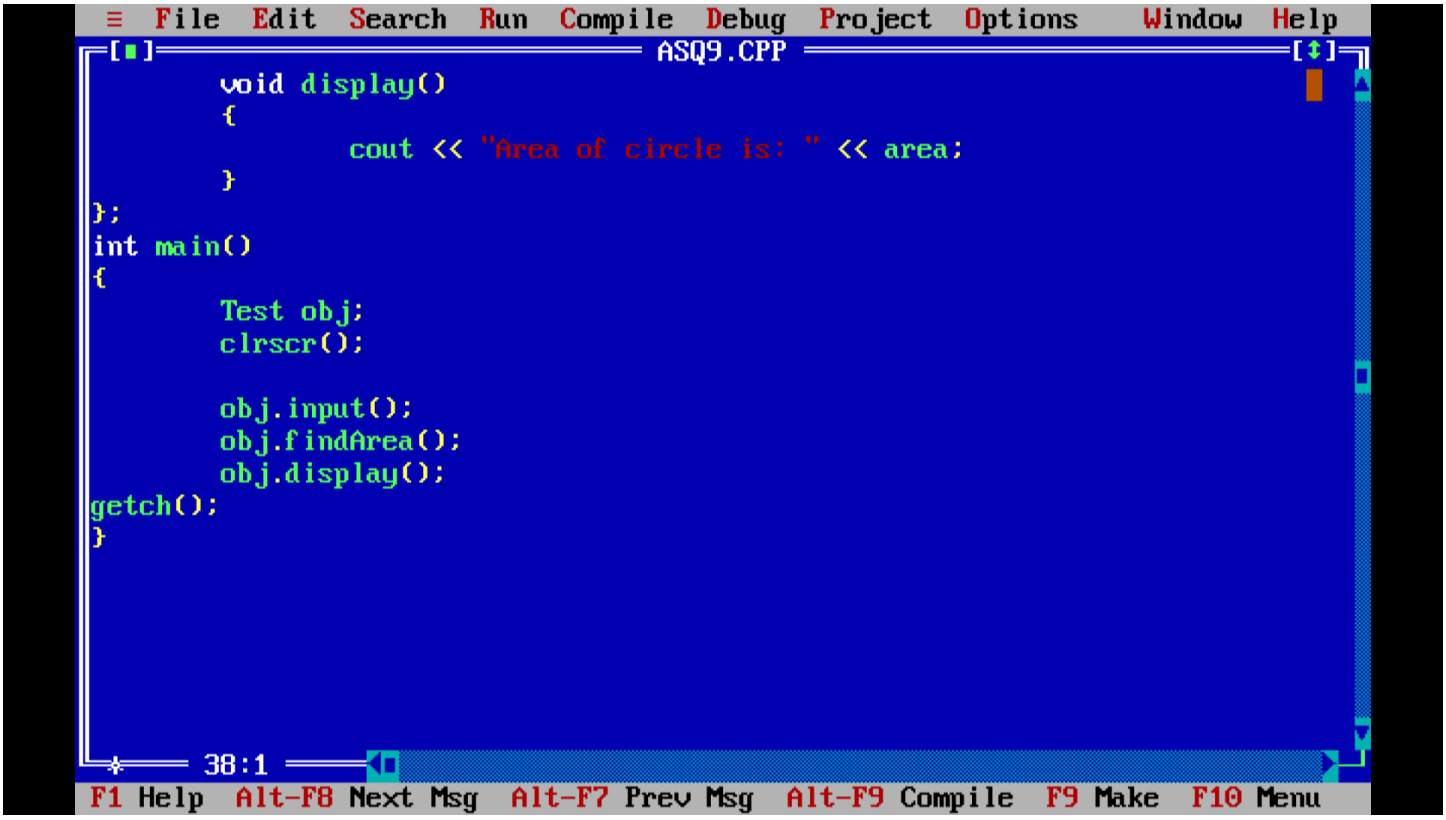
```
Enter a character: 1
ASCII value of 1 is 49
```

```
Enter a character: A
ASCII value of A is 65_
```

```
Enter a character: a
ASCII value of a is 97
```

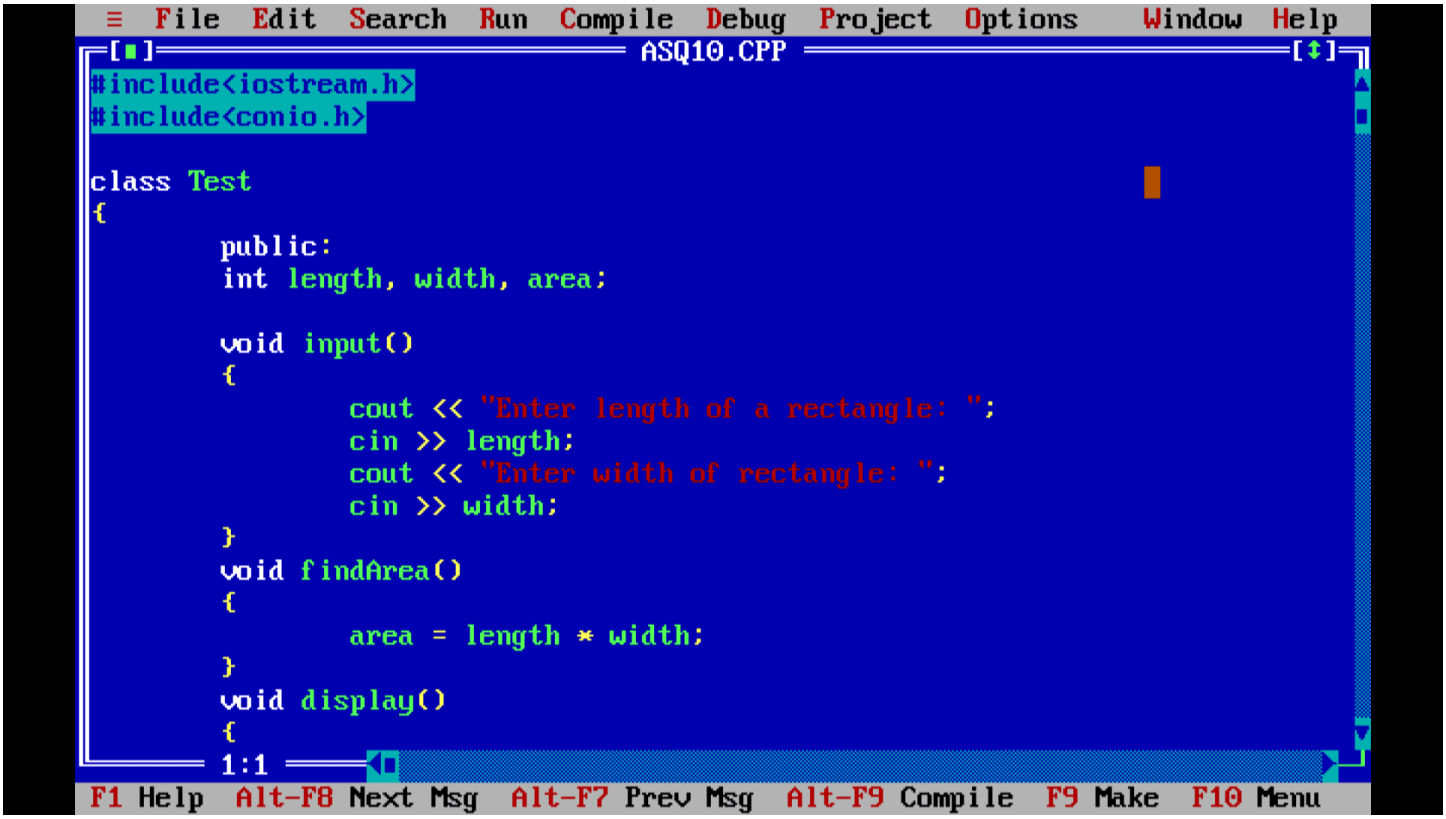
ASQ 9: Calculate area of circle

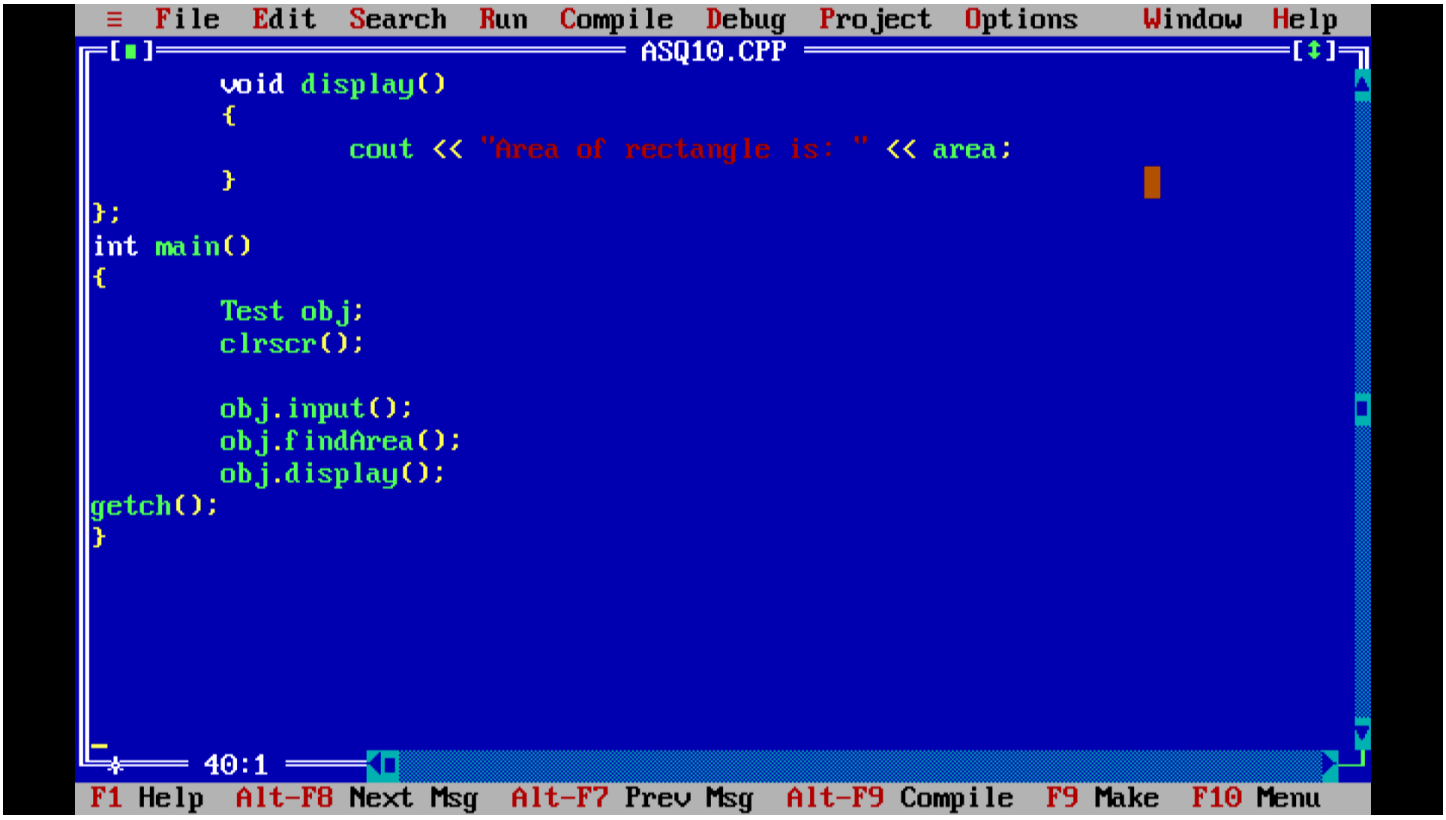




```
Enter radius of a circle: 3
Area of circle is: 28.26
```

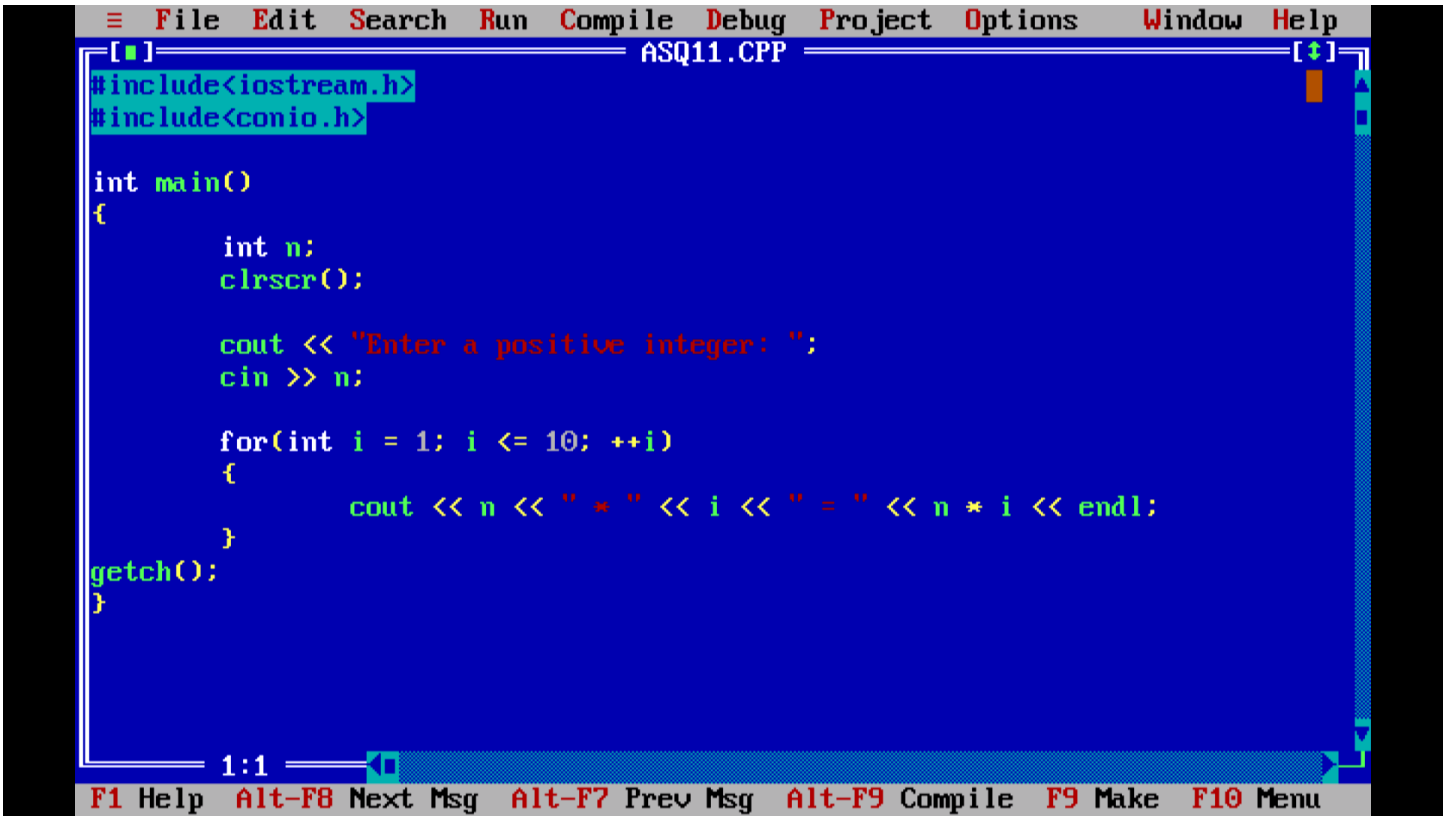
ASQ 10: Calculate area of Rectangle





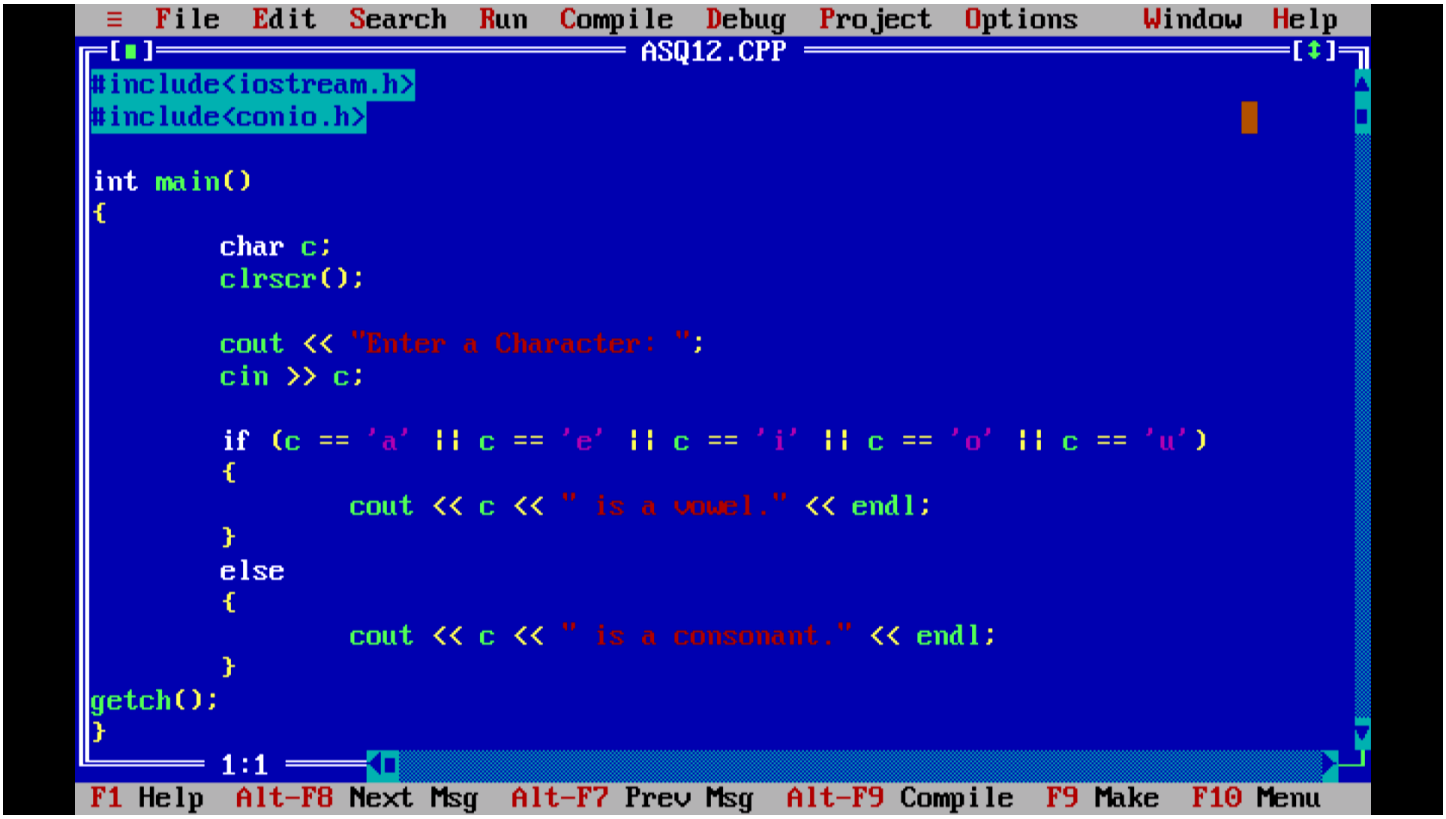

Enter length of a rectangle: 3
Enter width of rectangle: 4
Area of rectangle is: 12_

ASQ 11: Multiplication of any table




```
Enter a positive integer: 2
2 * 1 = 2
2 * 2 = 4
2 * 3 = 6
2 * 4 = 8
2 * 5 = 10
2 * 6 = 12
2 * 7 = 14
2 * 8 = 16
2 * 9 = 18
2 * 10 = 20
```

ASQ 12: Check vowel or constant



```
Enter a Character: b
b is a consonant.
_
```

```
Enter a Character: a
a is a vowel.
_
```

ASQ 13: Armstrong Number

```
≡ File  Edit  Search  Run  Compile  Debug  Project  Options    Window  Help
[■]                          ASQ13.CPP                                [↕]
#include<iostream.h>
#include<conio.h>
class Test
{
        public:
        int checkArmstrong(int x)
        {
                int r, num = 0;

                while(x > 0)
                {
                        r = x % 10;
                        num = num + r * r * r;
                        x = x / 10;
                }
                return num;
        }
};
int main()
{
        int x, arm;
      1:1
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
[■]                          ASQ13.CPP                                [↕]
int main()
{
        int x, arm;
        clrscr();

        cout << "Enter a number: ";
        cin >> x;

        Test obj;
        arm = obj.checkArmstrong(x);

        if(arm == x)
        {
                cout << "Number is armstrong: " << x;
        }
        else
        {
                cout << "Number is not armstrong: " << x;
        }
getch();
}
     39:1
F1 Help  Alt-F8 Next Msg  Alt-F7 Prev Msg  Alt-F9 Compile  F9 Make  F10 Menu
```

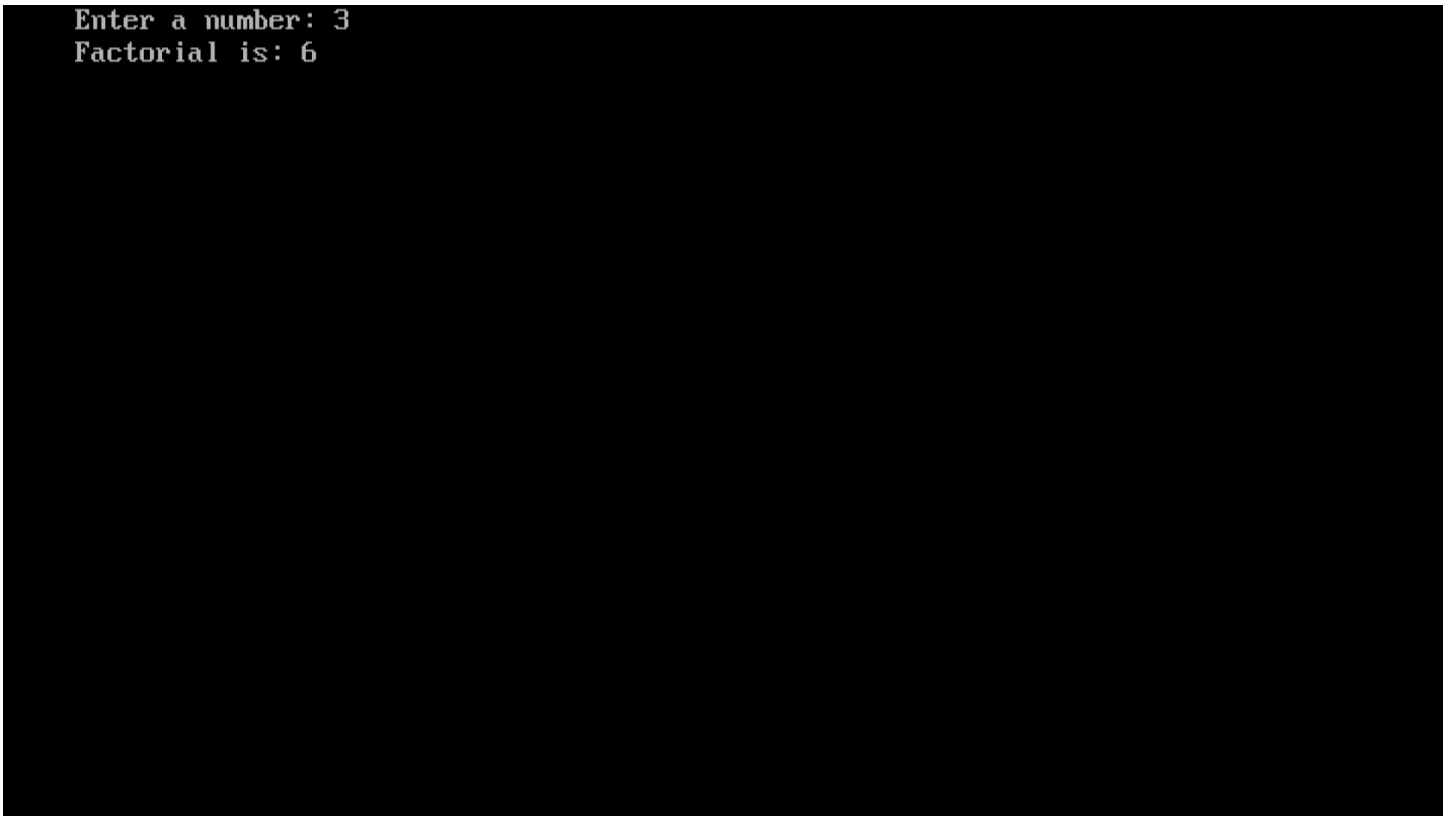
```
Enter a number: 135
Number is not armstrong: 135
```

```
Enter a number: 153
Number is armstrong: 153
```

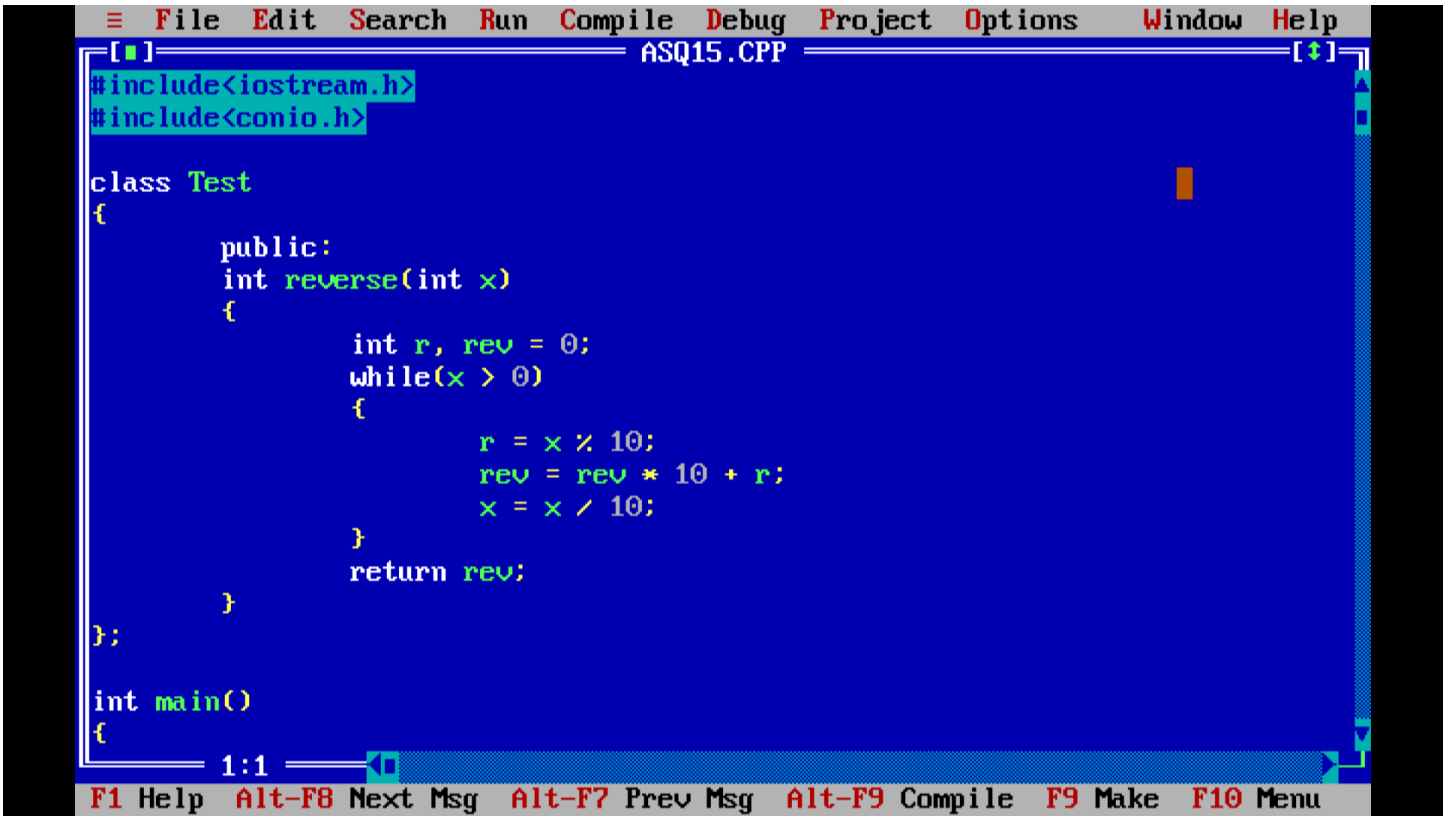
ASQ 14: Factorial

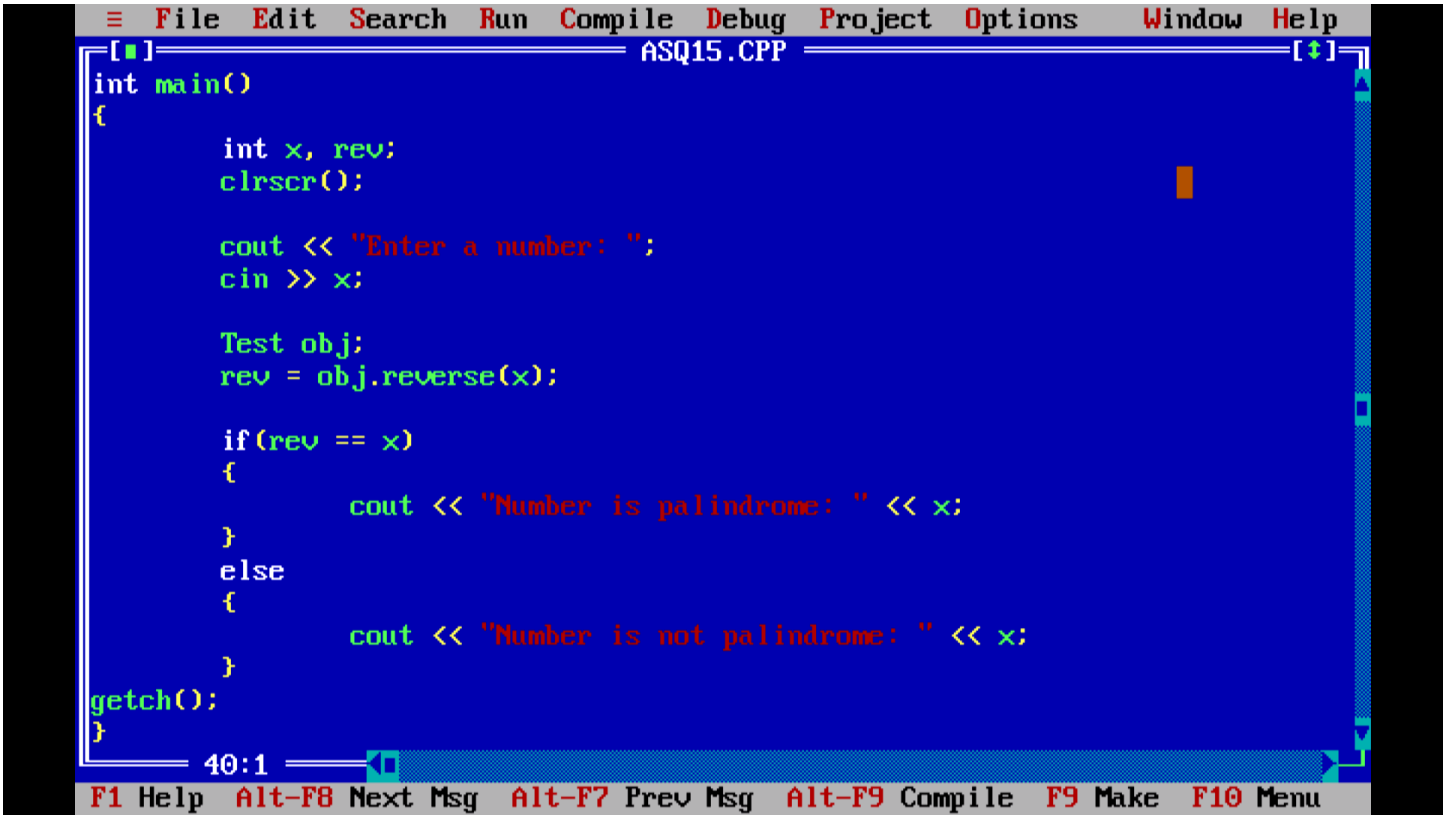
```
≡ File  Edit  Search  Run  Compile  Debug  Project  Options    Window  Help
[■]                          ASQ14.CPP                                [↕]
#include<iostream.h>
#include<conio.h>

class Test
{
        public:
        int factorial(int x)
        {
                int i, f=1;
                for(i = 1; i <= x; i++)
                {
                        f = f * i;
                }
                return f;
        }
};

int main()
{
        int x, f;
        clrscr();
 1:1
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
[■]                          ASQ14.CPP                                [↕]
int main()
{
        int x, f;
        clrscr();

        cout << "Enter a number: ";
        cin >> x;

        Test obj;
        f = obj.factorial(x);

        cout << "Factorial is: " << f;
getch();
}
 38:1
F1 Help  Alt-F8 Next Msg  Alt-F7 Prev Msg  Alt-F9 Compile  F9 Make  F10 Menu
```


Enter a number: 3
Factorial is: 6

ASQ 15: Palindrome

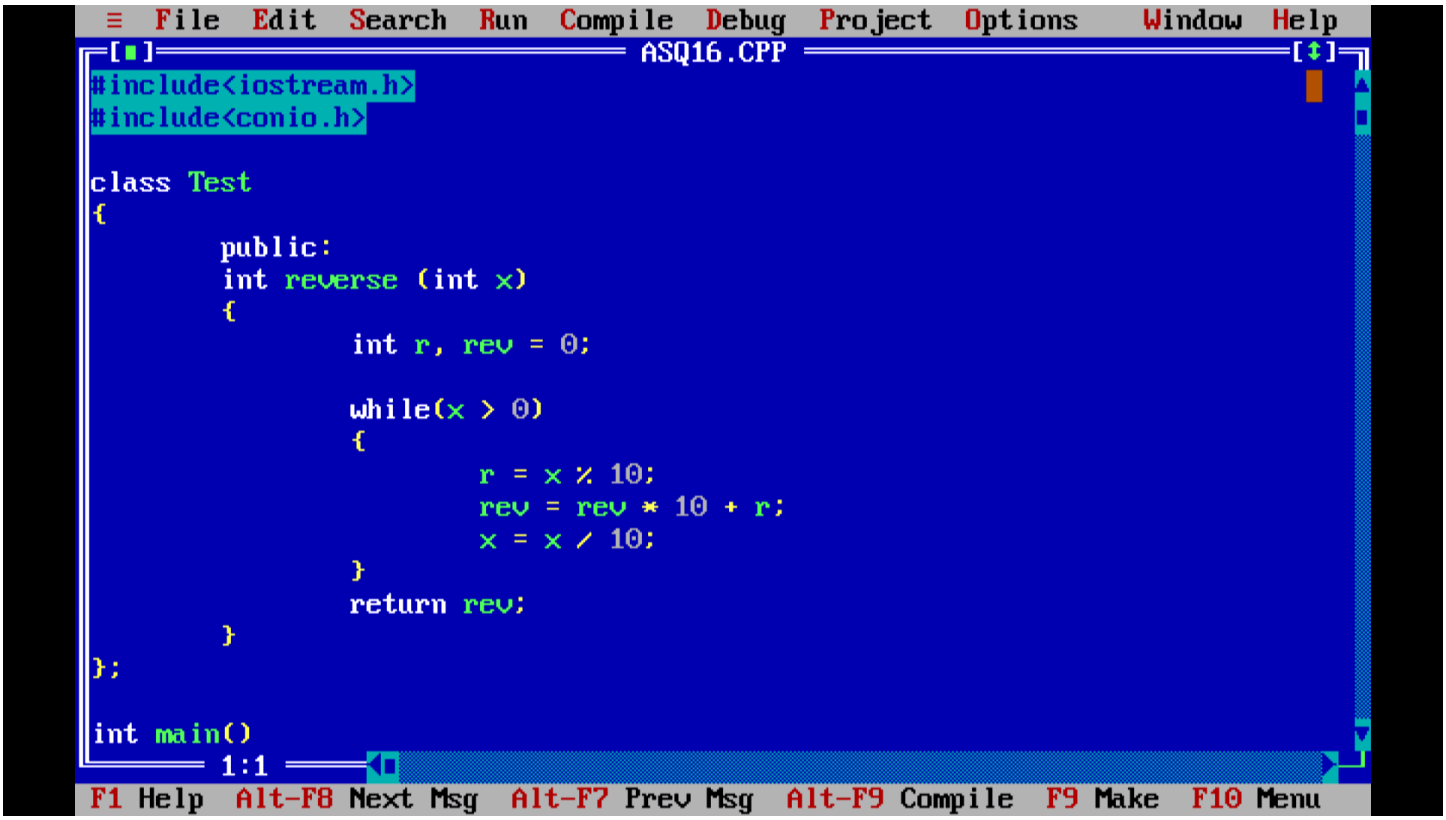


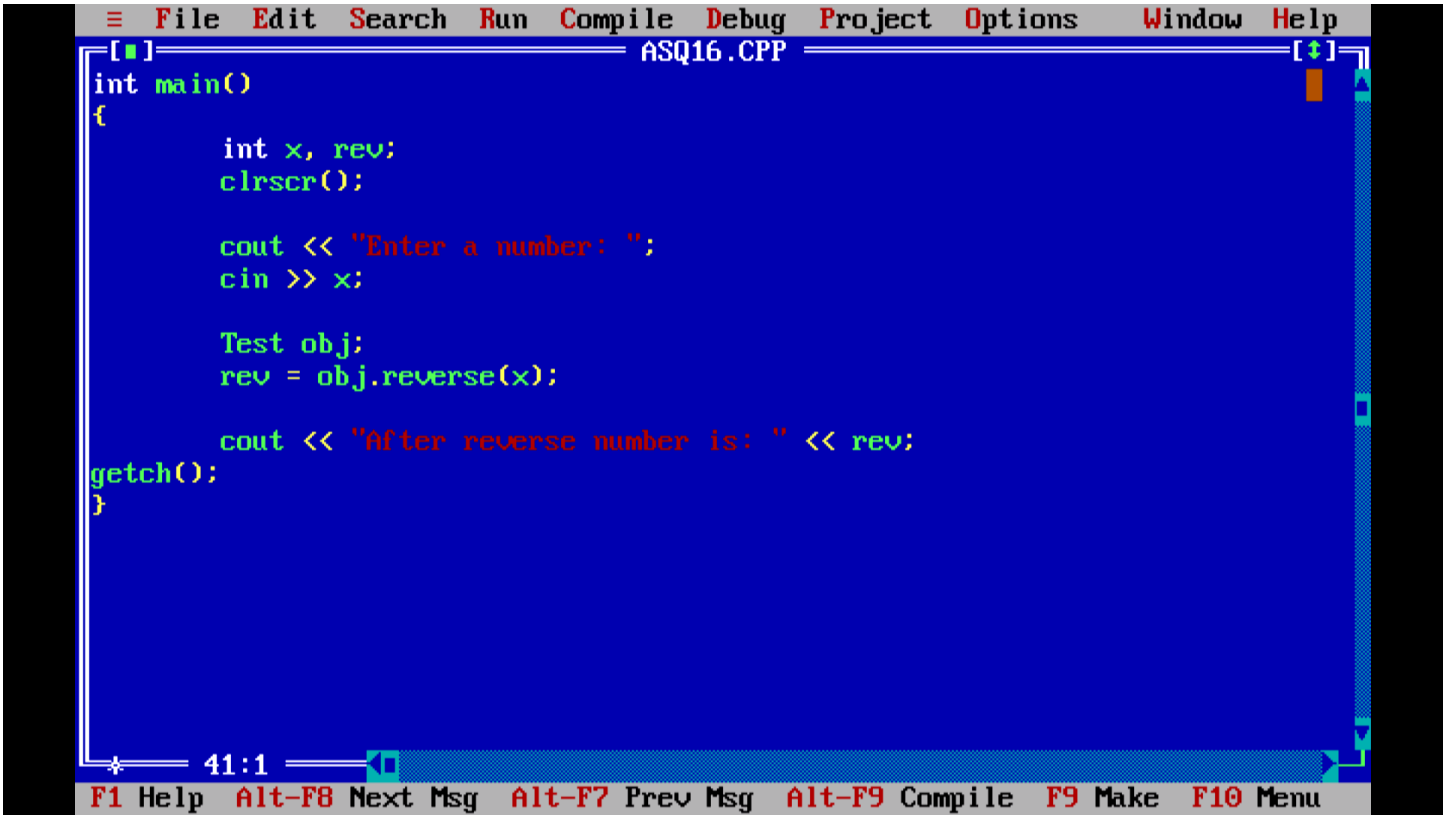


```
Enter a number: 121
Number is palindrome: 121
```

```
Enter a number: 12
Number is not palindrome: 12_
```

ASQ 16: Reverse Number






Enter a number: 12
After reverse number is: 21

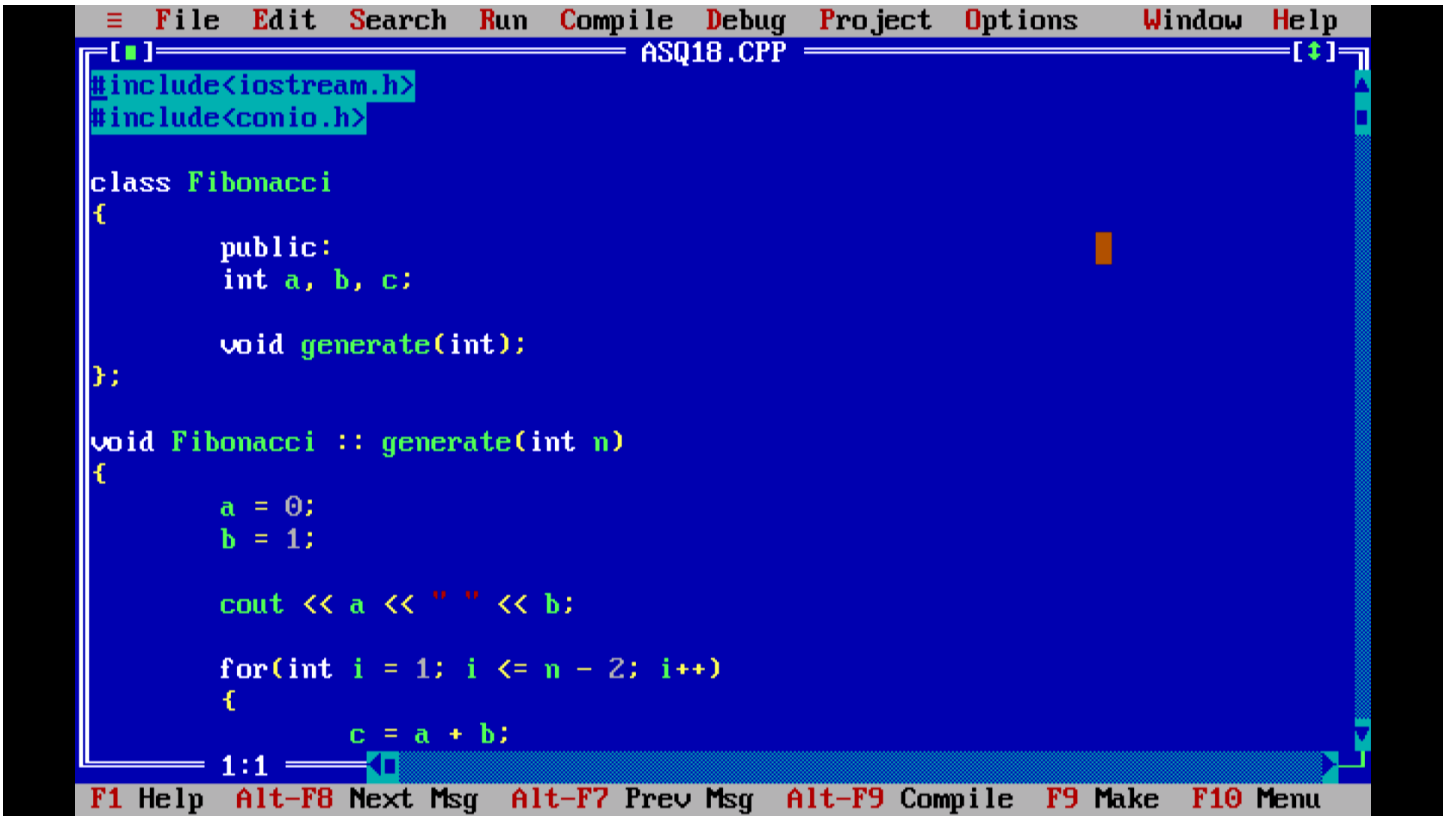
ASQ 17: Print N natural Number

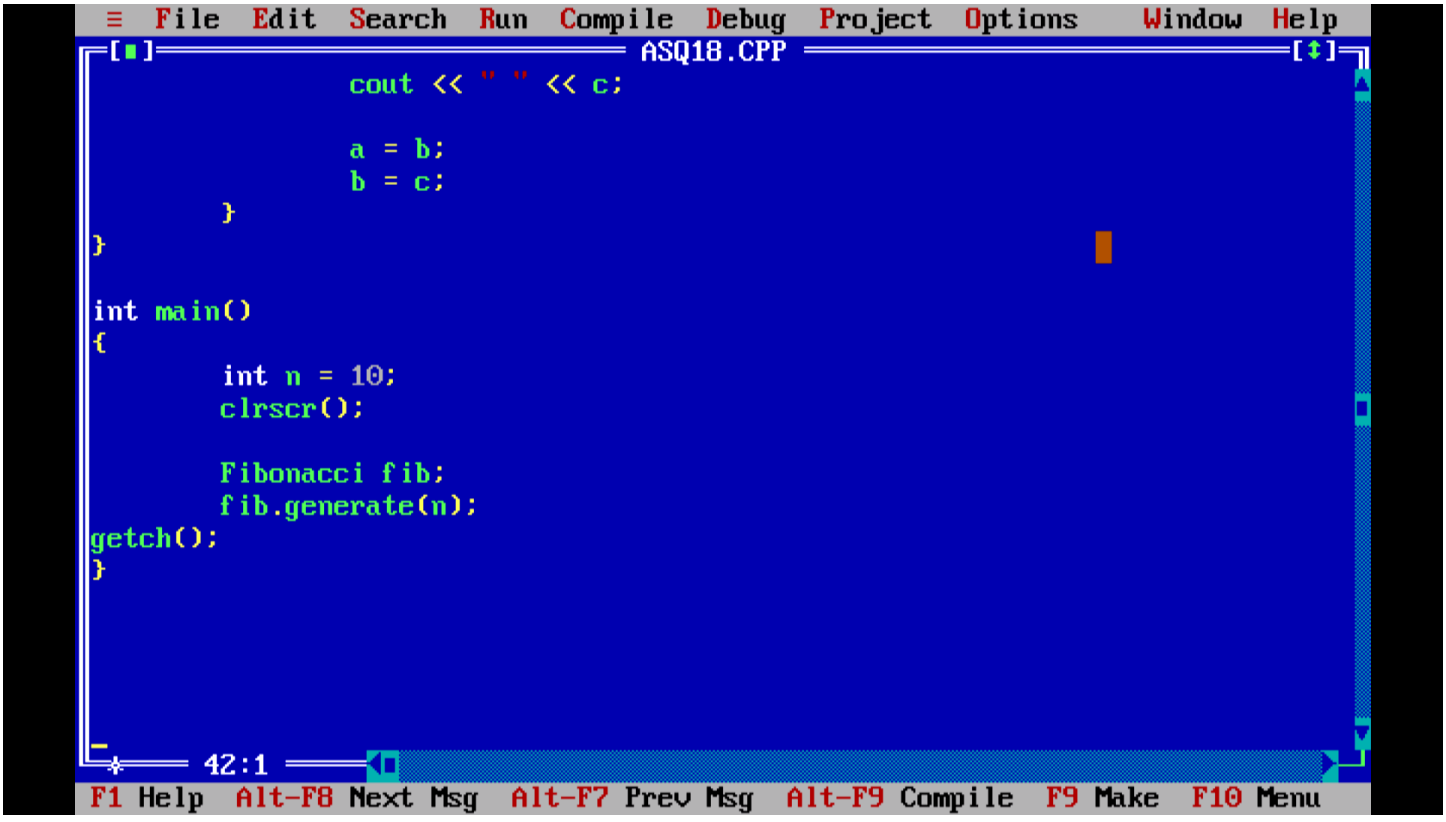
```
≡ File  Edit  Search  Run  Compile  Debug  Project  Options    Window  Help
[■]                          ASQ17.CPP                                [↕]
#include<iostream.h>
#include<conio.h>

class A
{
        int n, i;
        public:
        void input()
        {
                cout << "Enter Number: ";
                cin >> n;
        }
        void output()
        {
                for(i = 1; i <= n; i++)
                {
                        cout << ends << i;
                }
        }
};
void main()
        1:1
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
[■]                          ASQ17.CPP                                [↕]
void main()
{
        clrscr();
        A obj;
        obj.input();
        obj.output();
getch();
}
        41:1
F1 Help  Alt-F8 Next Msg  Alt-F7 Prev Msg  Alt-F9 Compile  F9 Make  F10 Menu
```

```
Enter Number: 10
 1 2 3 4 5 6 7 8 9 10
```

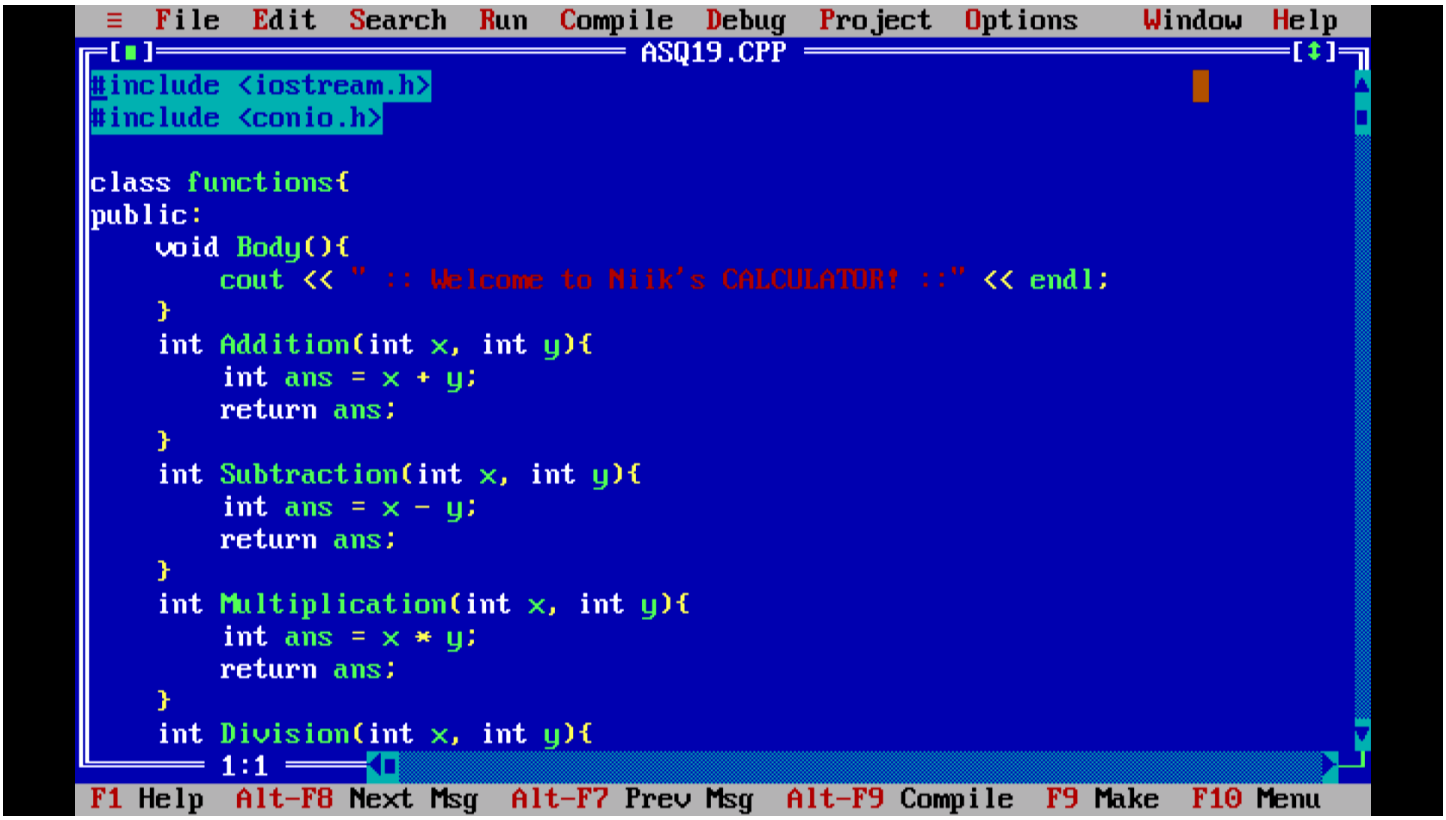
ASQ 18: Fibonacci Series

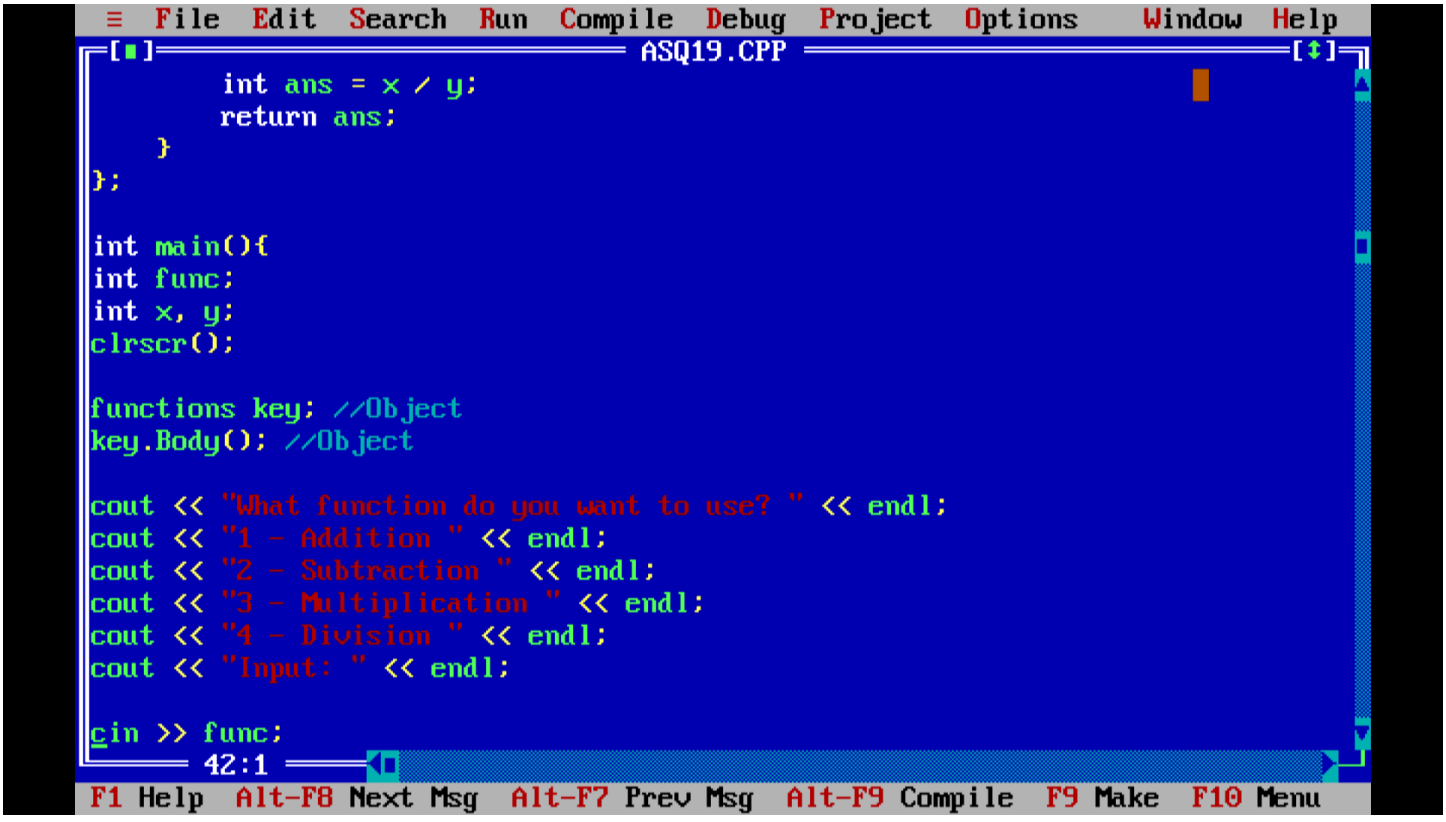


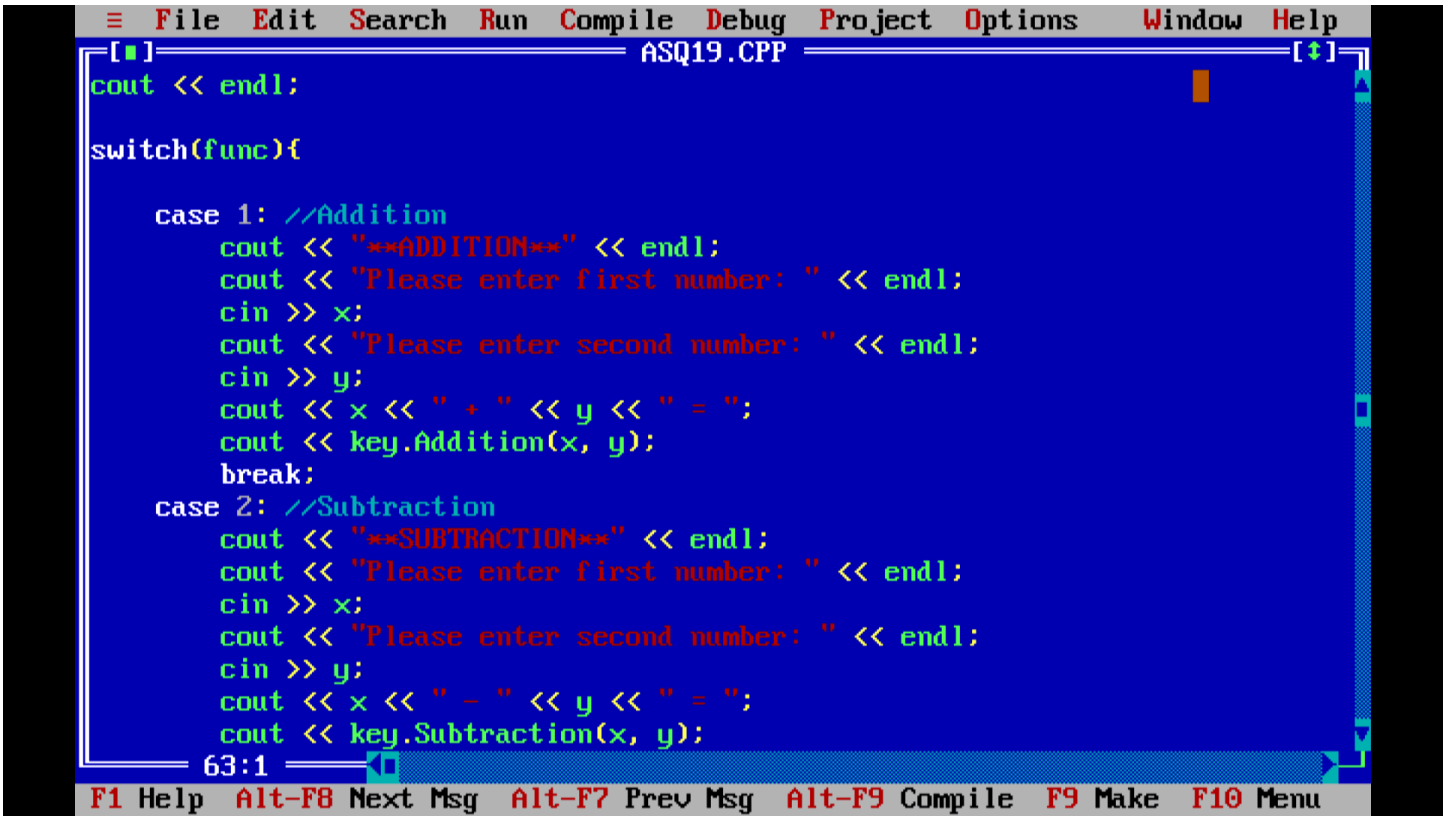


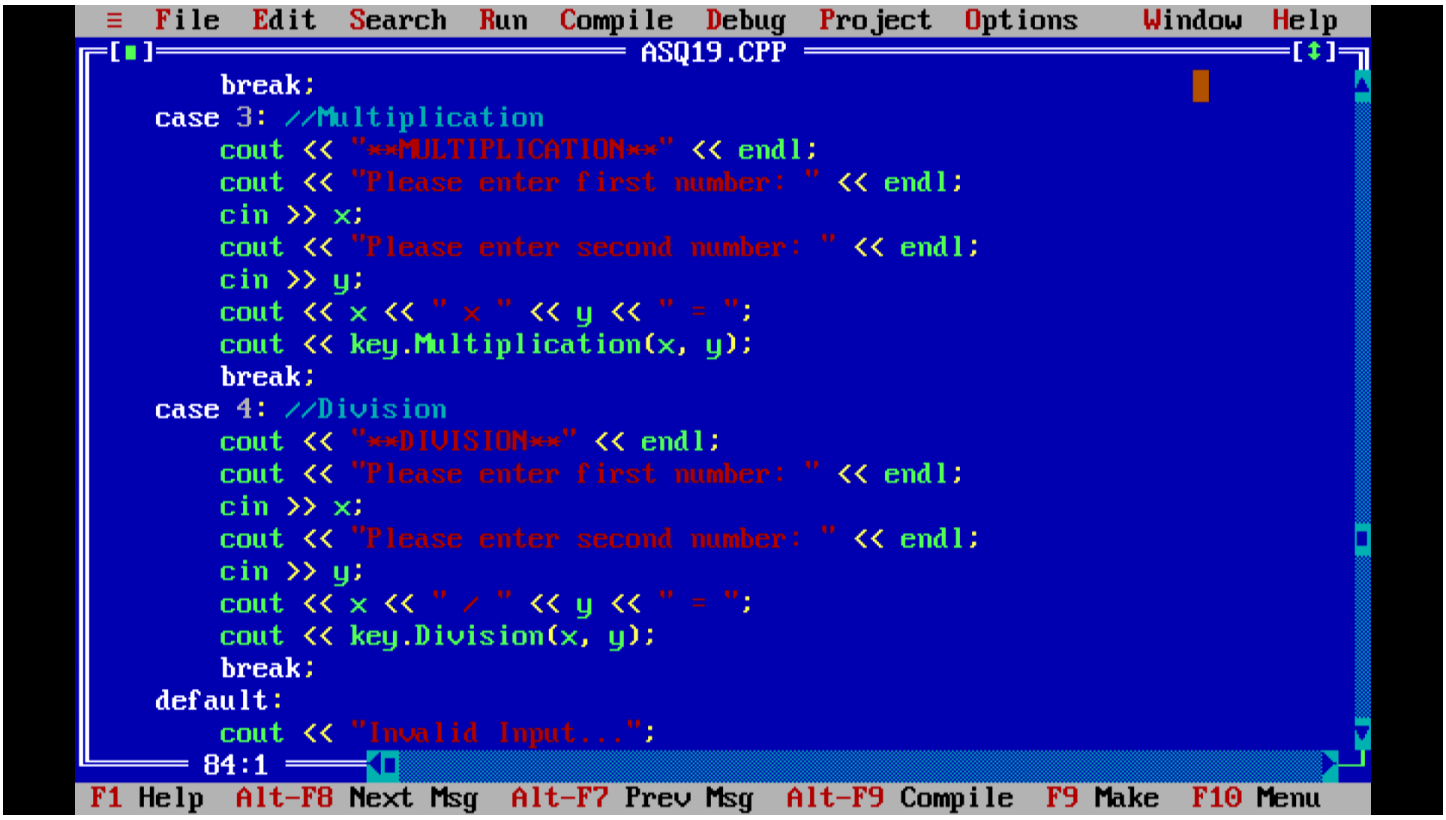

0 1 1 2 3 5 8 13 21 34

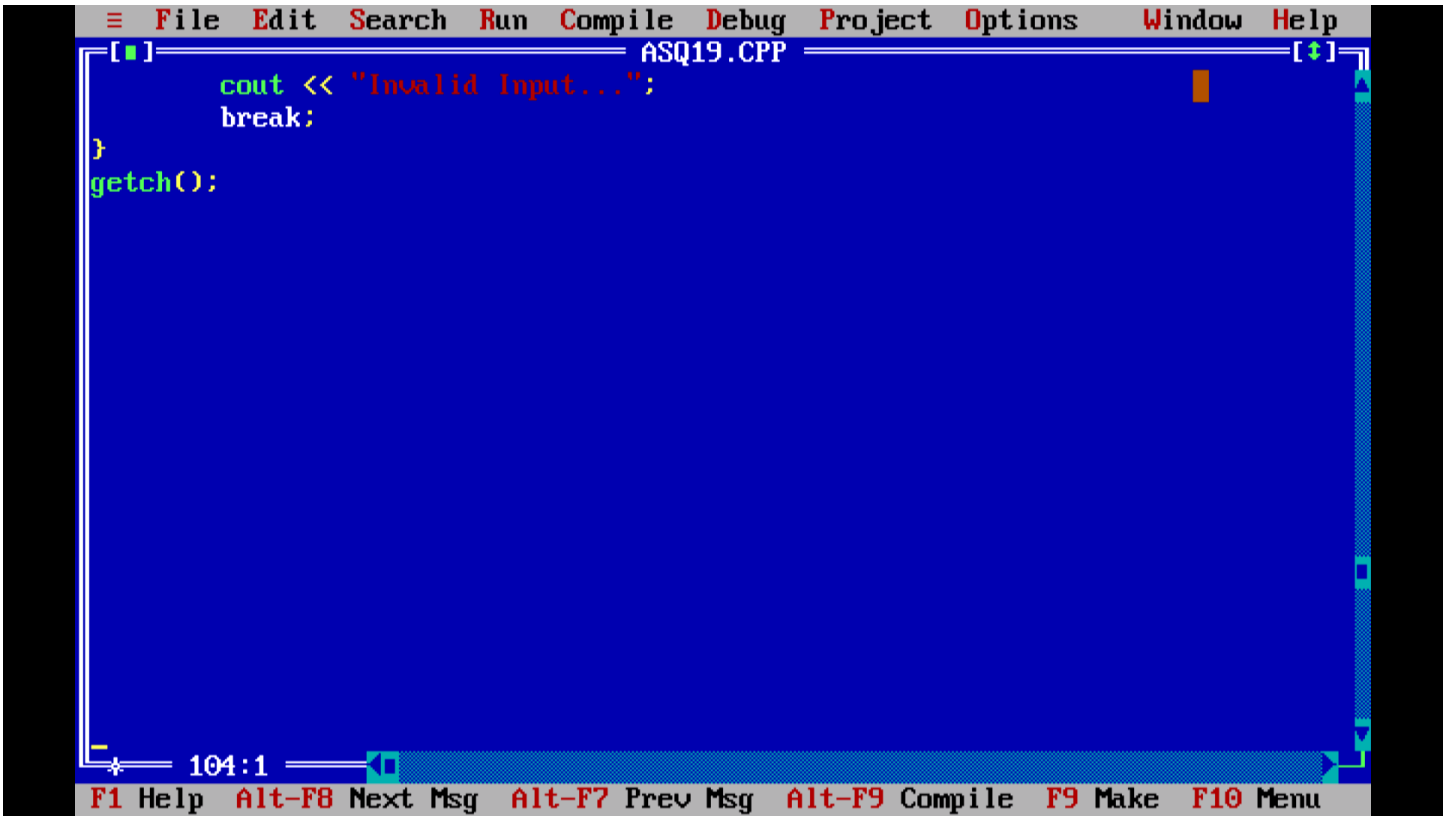
ASQ 19: Make Calculator






File Edit Search Run Compile Debug Project Options Window Help
ASQ19.CPP
cout << endl;
switch(func){
case 1: //Addition
cout << "**ADDITION**" << endl;
cout << "Please enter first number: " << endl;
cin >> x;
cout << "Please enter second number: " << endl;
cin >> y;
cout << x << " + " << y << " = ";
cout << key.Addition(x, y);
break;
case 2: //Subtraction
cout << "**SUBTRACTION**" << endl;
cout << "Please enter first number: " << endl;
cin >> x;
cout << "Please enter second number: " << endl;
cin >> y;
cout << x << " - " << y << " = ";
cout << key.Subtraction(x, y);
63:1
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
ASQ19.CPP
break;
case 3: //Multiplication
cout << "**MULTIPLICATION**" << endl;
cout << "Please enter first number: " << endl;
cin >> x;
cout << "Please enter second number: " << endl;
cin >> y;
cout << x << " x " << y << " = ";
cout << key.Multiplication(x, y);
break;
case 4: //Division
cout << "**DIVISION**" << endl;
cout << "Please enter first number: " << endl;
cin >> x;
cout << "Please enter second number: " << endl;
cin >> y;
cout << x << " / " << y << " = ";
cout << key.Division(x, y);
break;
default:
cout << "Invalid Input...";
84:1
F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu




```
 :: Welcome to Niik's CALCULATOR! ::
What function do you want to use?
1 - Addition
2 - Subtraction
3 - Multiplication
4 - Division
Input:
1

**ADDITION**
Please enter first number:
13
Please enter second number:
12
13 + 12 = 25
```

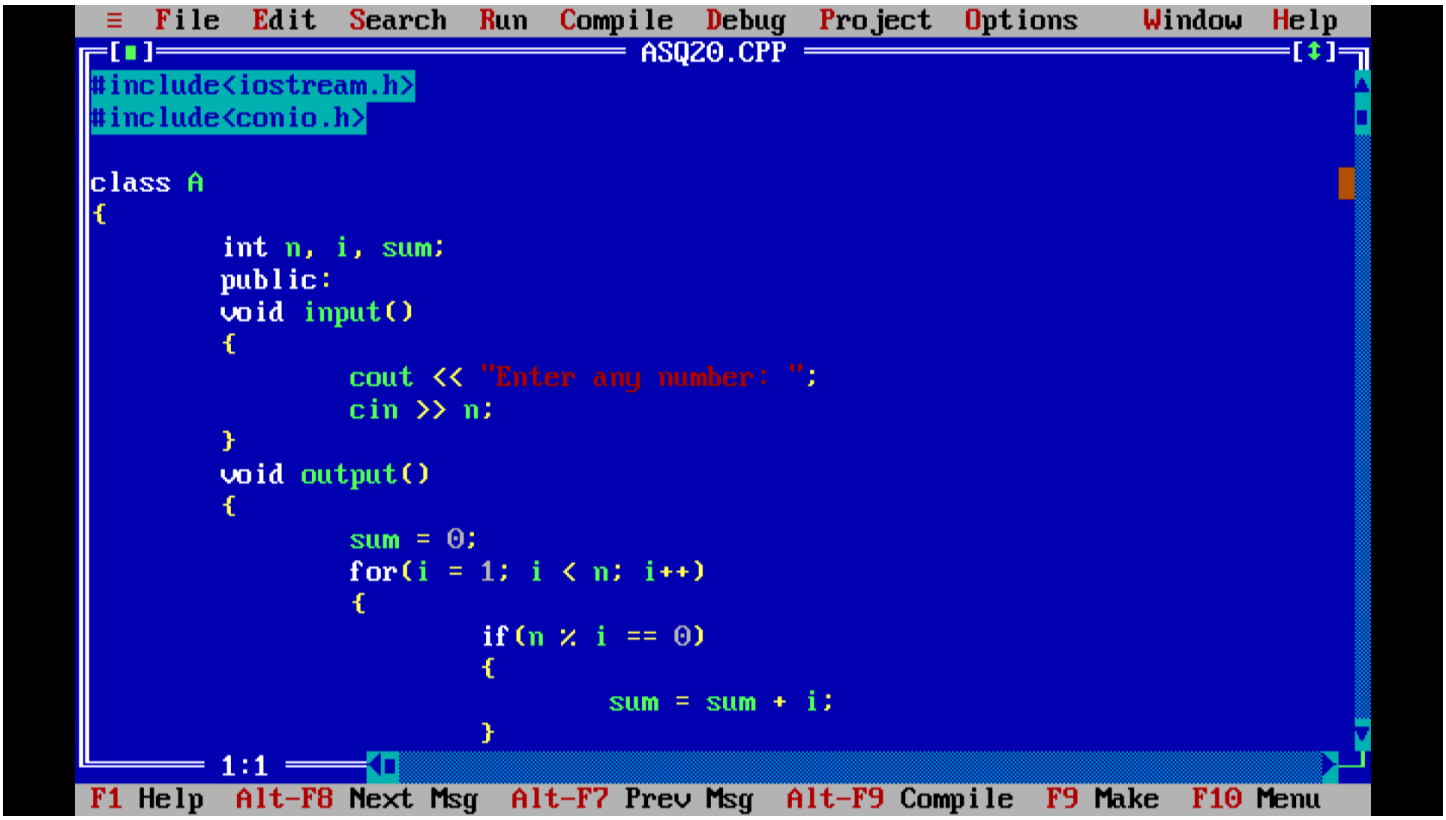
```
 :: Welcome to Niik's CALCULATOR! ::
What function do you want to use?
1 - Addition
2 - Subtraction
3 - Multiplication
4 - Division
Input:
2

**SUBTRACTION**
Please enter first number:
45
Please enter second number:
34
45 - 34 = 11
```

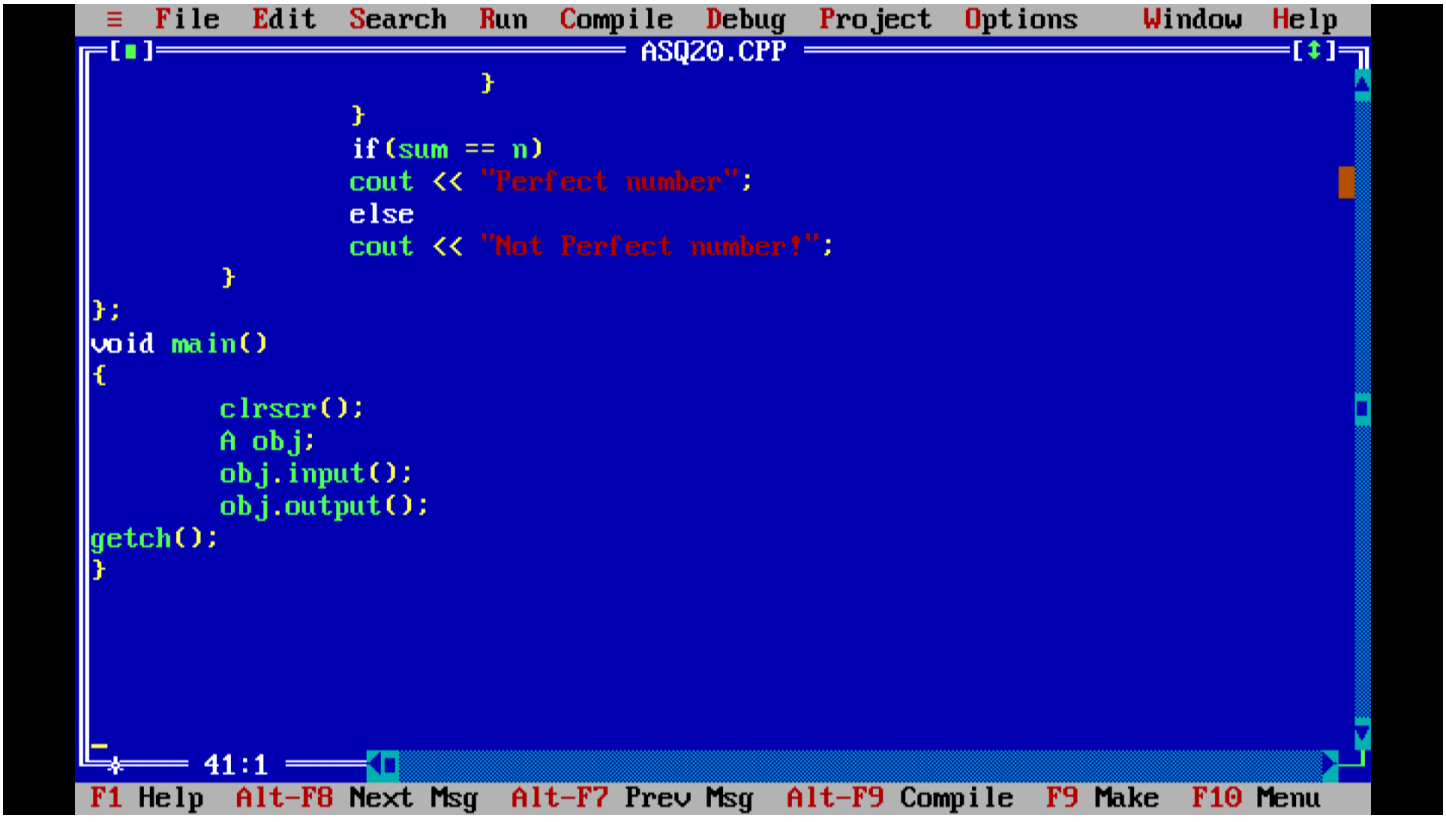
```
 :: Welcome to Niik's CALCULATOR! ::
What function do you want to use?
1 - Addition
2 - Subtraction
3 - Multiplication
4 - Division
Input:
3

**MULTIPLICATION**
Please enter first number:
19
Please enter second number:
20
19 x 20 = 380
```

```
 :: Welcome to Niik's CALCULATOR! ::
What function do you want to use?
1 - Addition
2 - Subtraction
3 - Multiplication
4 - Division
Input:
4

**DIVISION**
Please enter first number:
60
Please enter second number:
12
60 / 12 = 5
```

```
 :: Welcome to Niik's CALCULATOR! ::
What function do you want to use?
1 - Addition
2 - Subtraction
3 - Multiplication
4 - Division
Input:
5

Invalid Input...
```

ASQ 20: Perfect Number

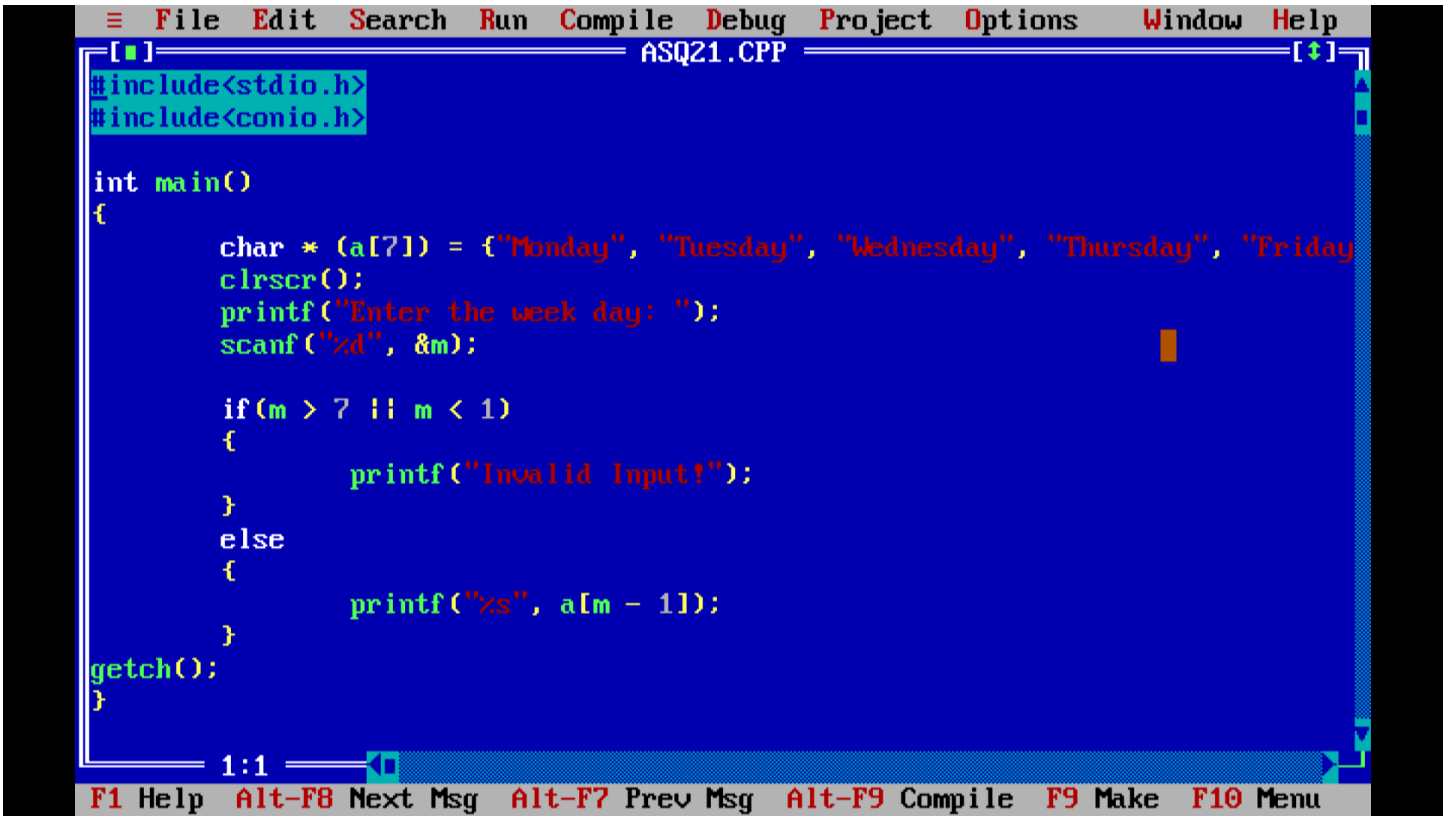


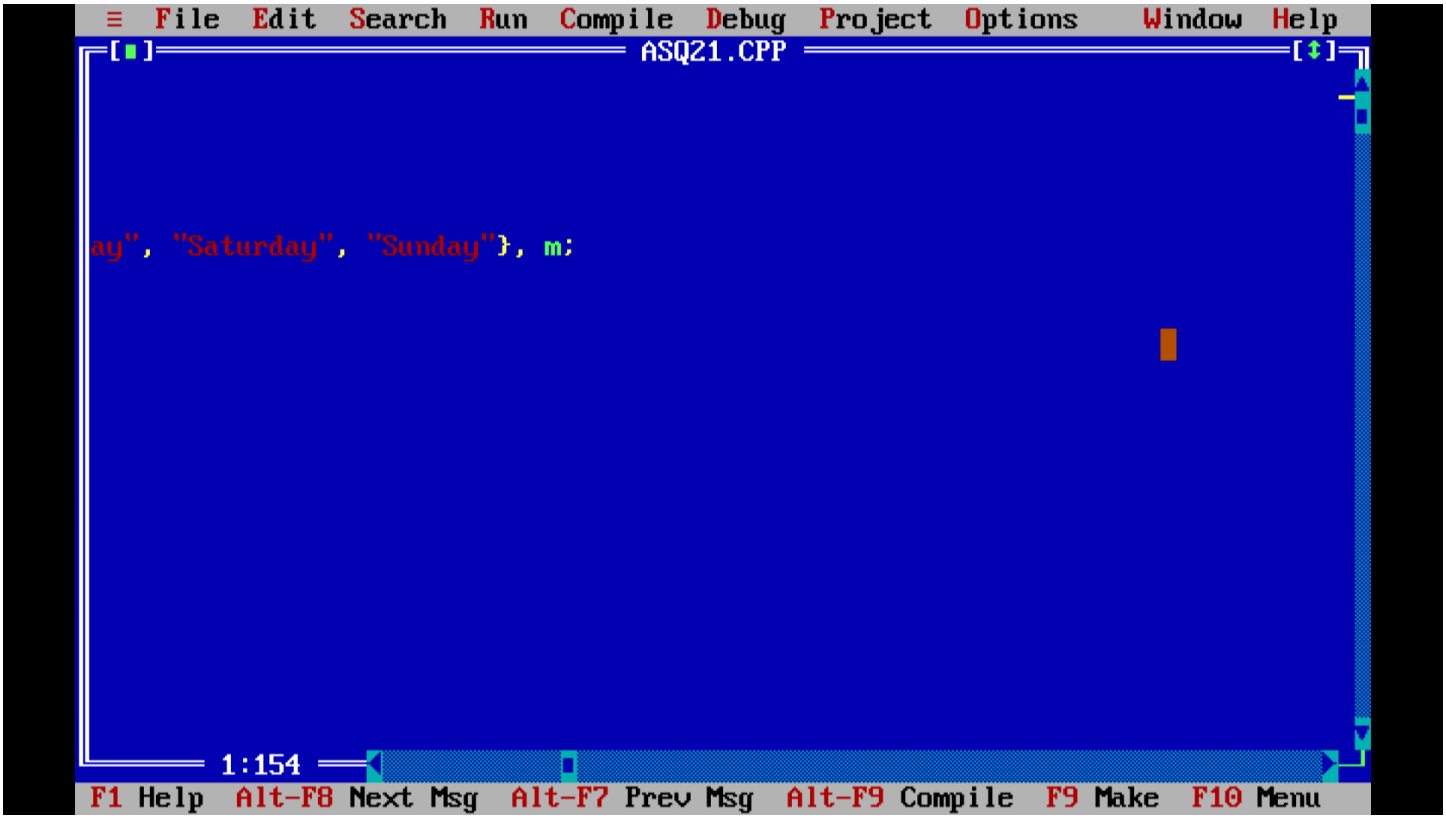


```
Enter any number: 6
Perfect number_
```

```
Enter any number: 2
Not Perfect number!_
```

ASQ 21: Print Days of the Week





```
Enter the week day: 5
Friday_
```

```
Enter the week day: 8
Invalid Input!_
```

ASQ 22: Using endl manipulator

```
≡ File  Edit  Search  Run  Compile  Debug  Project  Options    Window  Help
[■]                          ASQ22.CPP                                [↕]
#include<iostream.h>
#include<conio.h>

int main()
{
        clrscr();
        cout << "Hello" << endl << "World!";
getch();
}

                1:1
F1 Help  Alt-F8 Next Msg  Alt-F7 Prev Msg  Alt-F9 Compile  F9 Make  F10 Menu
```

```
Hello
World!
```

BY,

NMN Developers

MY COMPANY,

Niik Solution

Your Confusion. My Solution