Assignment # 01

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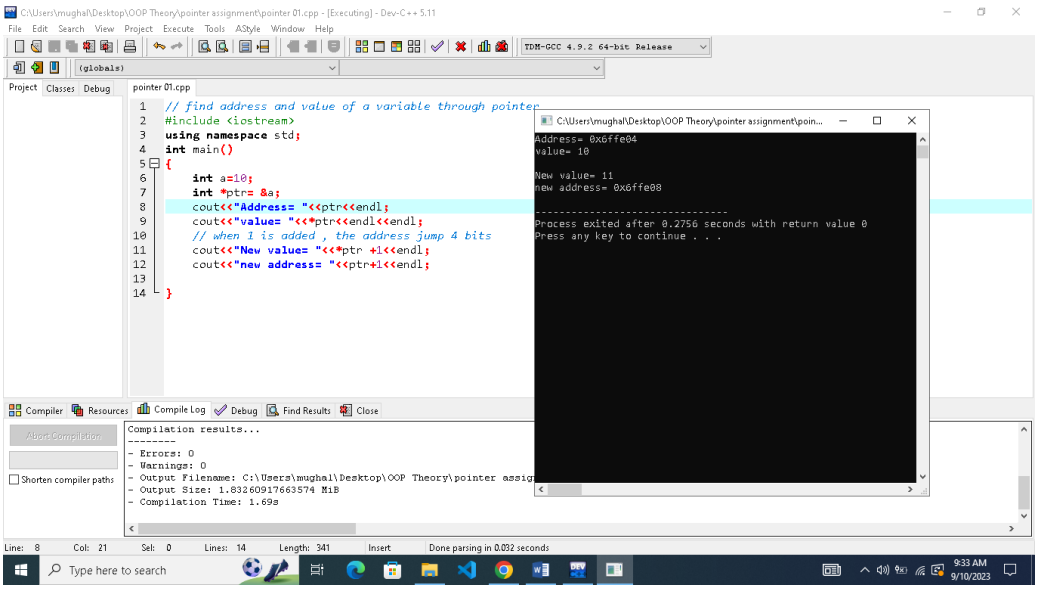
Program 01

```
// find address and value of a variable through pointer
#include <iostream>
using namespace std;
int main()
{
	int a=10;
	int *ptr= &a;
	cout<<"Address= "<<ptr<<endl;
	cout<<"value= "<<*ptr<<endl<<endl;
	// when 1 is added , the address jump 4 bits
	cout<<"New value= "<<*ptr +1<<endl;
	cout<<"new address= "<<ptr+1<<endl;
}
```

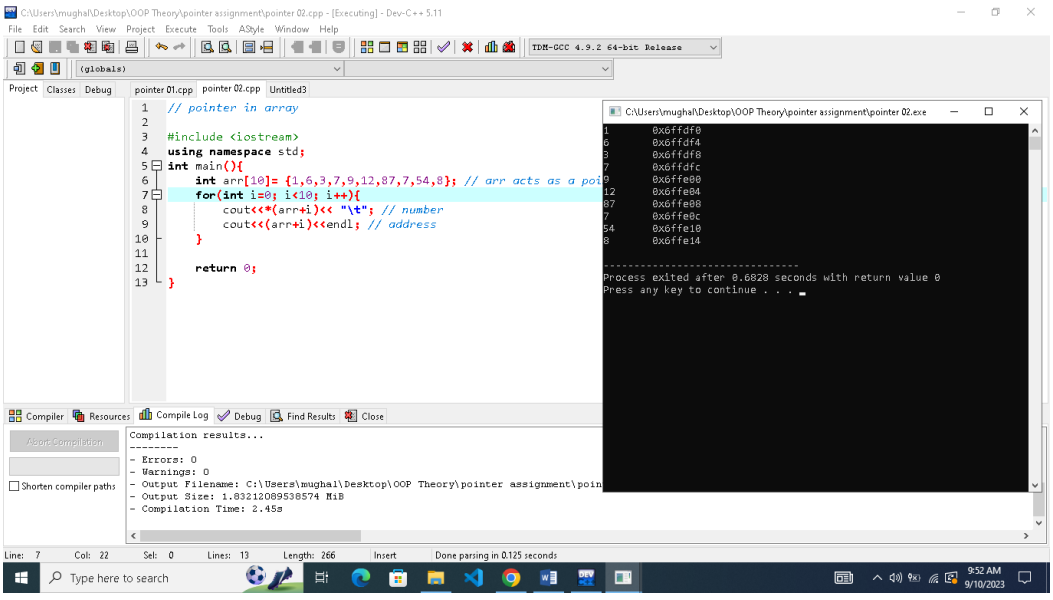
Output:



Program 2

```
// pointer in array


#include <iostream>
using namespace std;
int main(){
	int arr[10]= {1,6,3,7,9,12,87,7,54,8}; // arr acts as a pointer
	for(int i=0; i<10; i++){
		cout<<*(arr+i)<< "\t"; // number
		cout<<(arr+i)<<endl; // address
	}

	return 0;
}
```

Output

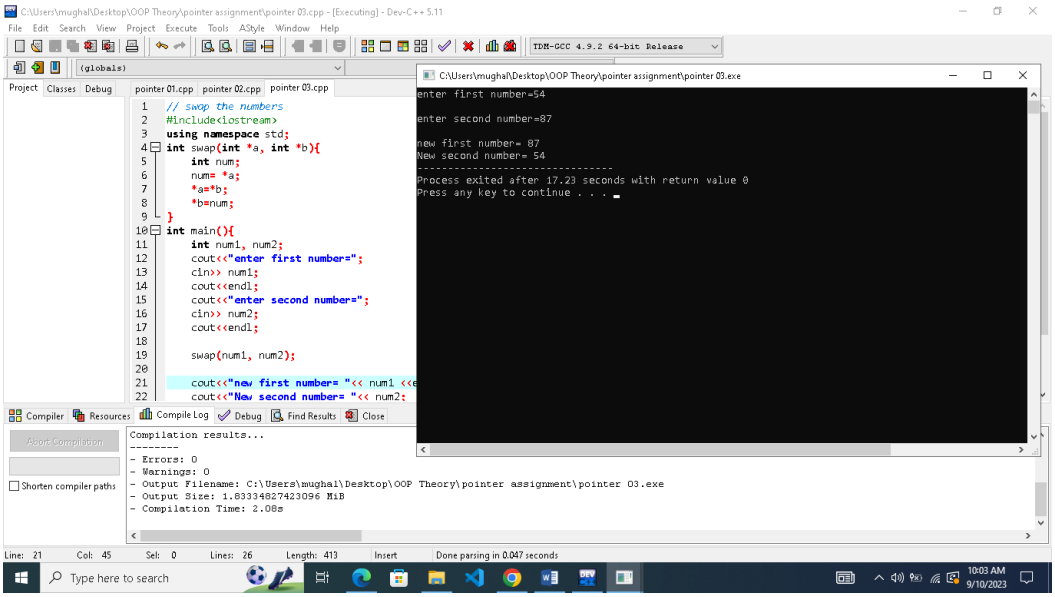


Program 3

```
// swap the numbers
#include<iostream>
using namespace std;
int swap(int *a, int *b){
                        int num;
                        num= *a;
                        *a=*b;
                        *b=num;
}
int main(){
                        int num1, num2;
                        cout<<"enter first number=";
                        cin>> num1;
                        cout<<endl;
                        cout<<"enter second number=";
                        cin>> num2;
                        cout<<endl;

                        swap(num1, num2);

                        cout<<"new first number= "<< num1 <<endl;
                        cout<<"New second number= "<< num2;

                        return 0;
```

}

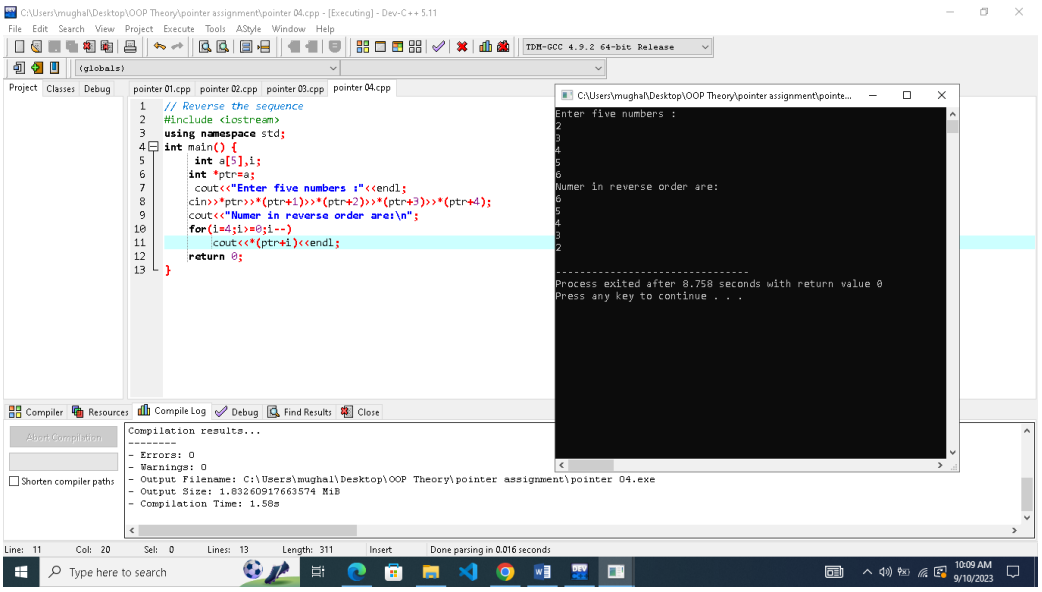
Output



Program 04

```
// Reverse the sequence
#include <iostream>
using namespace std;
int main() {
        int a[5],i;
       int *ptr=a;
        cout<<"Enter five numbers :"<<endl;
       cin>>*ptr>>*(ptr+1)>>*(ptr+2)>>*(ptr+3)>>*(ptr+4);
       cout<<"Numer in reverse order are:\n";
       for(i=4;i>=0;i--)
              cout<<*(ptr+i)<<endl;
       return 0;
}
```

Output

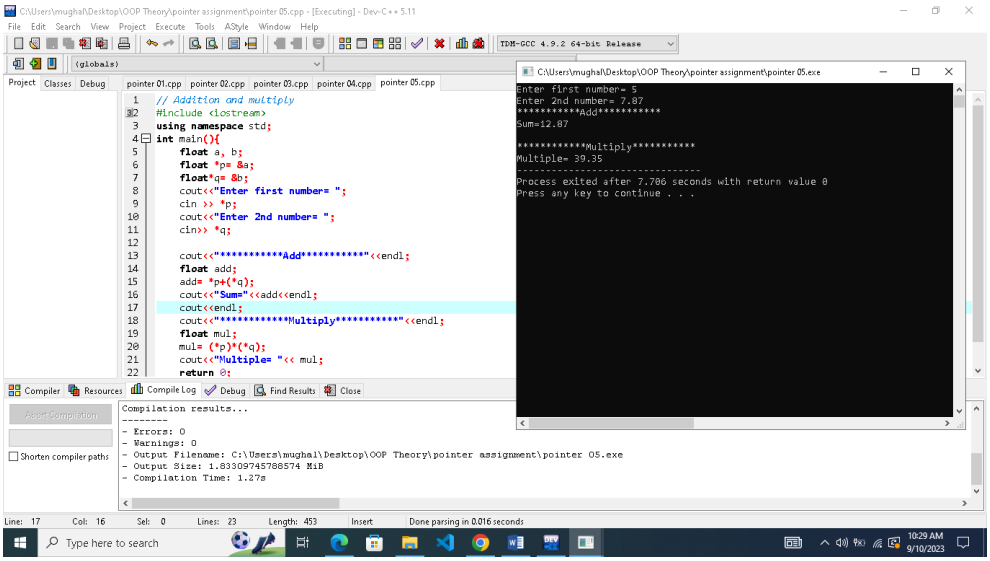


Program 05

```
// Addition and multiply
#include <iostream>
using namespace std;
int main(){
        float a, b;
        float *p= &a;
        float*q= &b;
        cout<<"Enter first number= ";
        cin >> *p;
        cout<<"Enter 2nd number= ";
        cin>> *q;


        cout<<"**********Add**********"<<endl;
        float add;
```

```
        add= *p+(*q);
        cout<<"Sum="<<add<<endl;
        cout<<endl;
        cout<<"************Multiply***********"<<endl;
        float mul;
        mul= (*p)*(*q);
        cout<<"Multiple= "<< mul;
        return 0;
}
```

Output

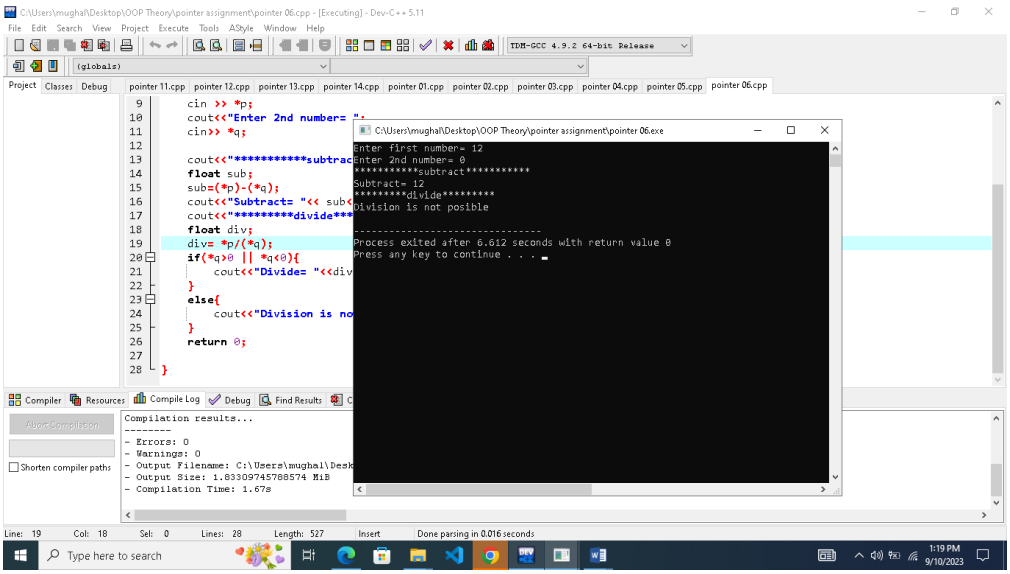


Program 06

```
// subtract and divide
#include <iostream>
using namespace std;
int main(){
        float a, b;
```

```
	float *p= &a;
	float*q= &b;
	cout<<"Enter first number= ";
	cin >> *p;
	cout<<"Enter 2nd number= ";
	cin>> *q;

	cout<<"**********subtract**********"<<endl;
	float sub;
	sub=(*p)-(*q);
	cout<<"Subtract= "<< sub<<endl;
	cout<<"**********divide**********"<<endl;
	float div;
	div= *p/(*q);
	if(*q>0 || *q<0){
		cout<<"Divide= "<<div<< endl;
	}
	else{
		cout<<"Division is not posible"<<endl;
	}
	return 0;
}
```

Output

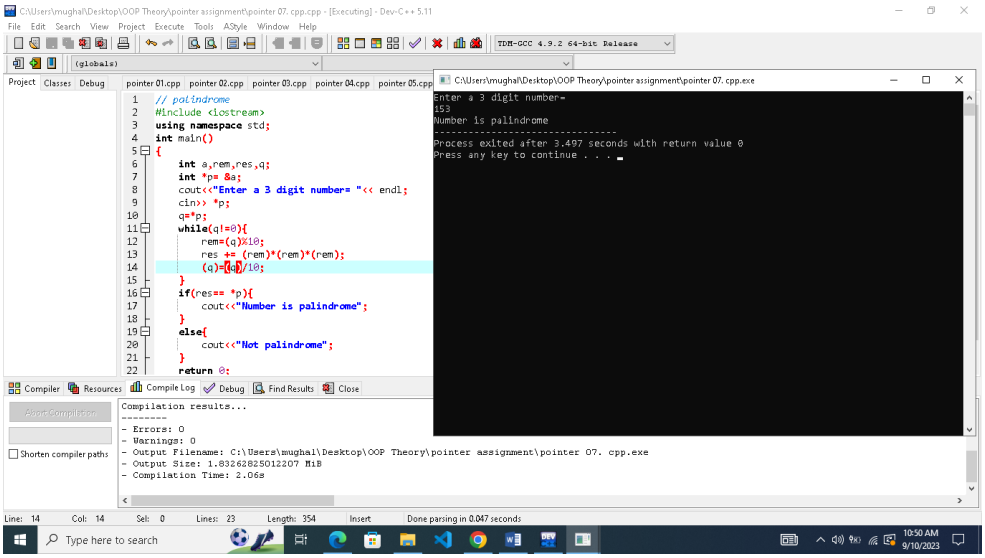


Program 07

```
// palindrome
#include <iostream>
using namespace std;
int main()
{
	int a,rem,res,q;
	int *p= &a;
	cout<<"Enter a 3 digit number= "<< endl;
	cin>> *p;
	q=*p;
	while(q!=0){
		rem=(q)%10;
		res += (rem)*(rem)*(rem);
		(q)=(q)/10;
	}
	if(res== *p){
```

```
        cout<<"Number is palindrome";
    }
    else{
        cout<<"Not palindrome";
    }
    return 0;
}
```

Output

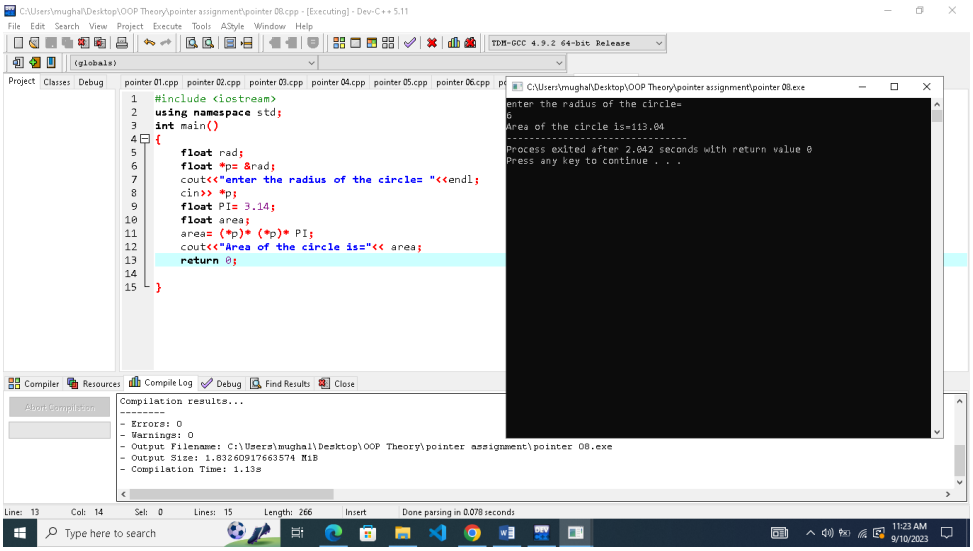


Program 8

```
#include <iostream>
using namespace std;
int main()
{
    float rad;
    float *p= &rad;
    cout<<"enter the radius of the circle= "<<endl;
    cin>> *p;
```

```
    float PI= 3.14;
    float area;
    area= (*p)* (*p)* PI;
    cout<<"Area of the circle is="<< area;
    return 0;

}
```

Output

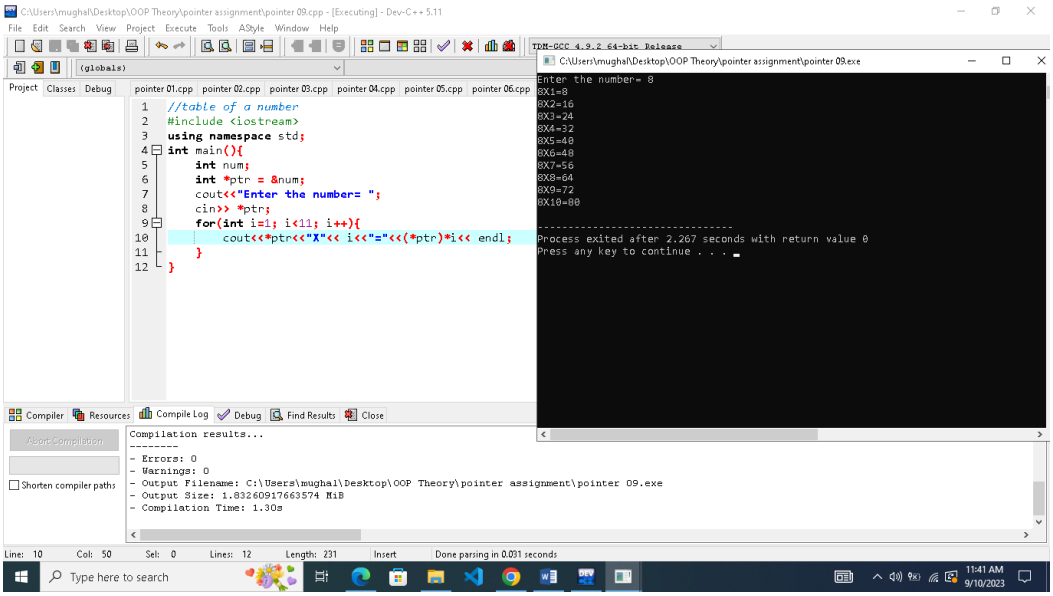


Program 9

```
//table of a number
#include <iostream>
using namespace std;
int main(){
    int num;
    int *ptr = &num;
    cout<<"Enter the number= ";
    cin>> *ptr;
```

```
    for(int i=1; i<11; i++){
        cout<<*ptr<<"X"<< i<<"="<<(*ptr)*i<< endl;
    }
}
```

Output

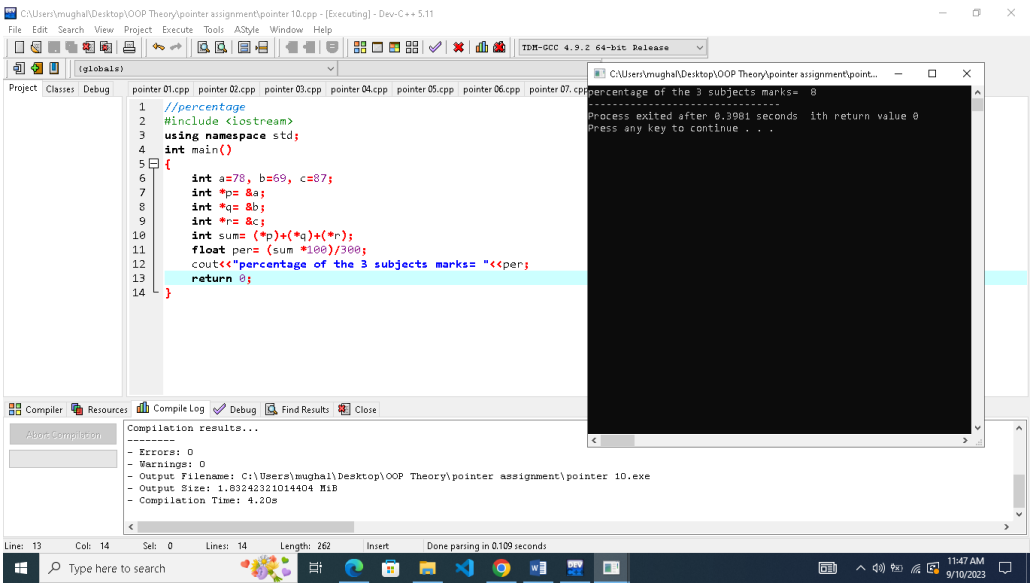


Program 10

```
//percentage
#include <iostream>
using namespace std;
int main()
{
    int a=78, b=69, c=87;
    int *p= &a;
    int *q= &b;
    int *r= &c;
    int sum= (*p)+(*q)+(*r);
```

```
    float per= (sum *100)/300;
    cout<<"percentage of the 3 subjects marks= "<<per;
    return 0;
}
```

Output

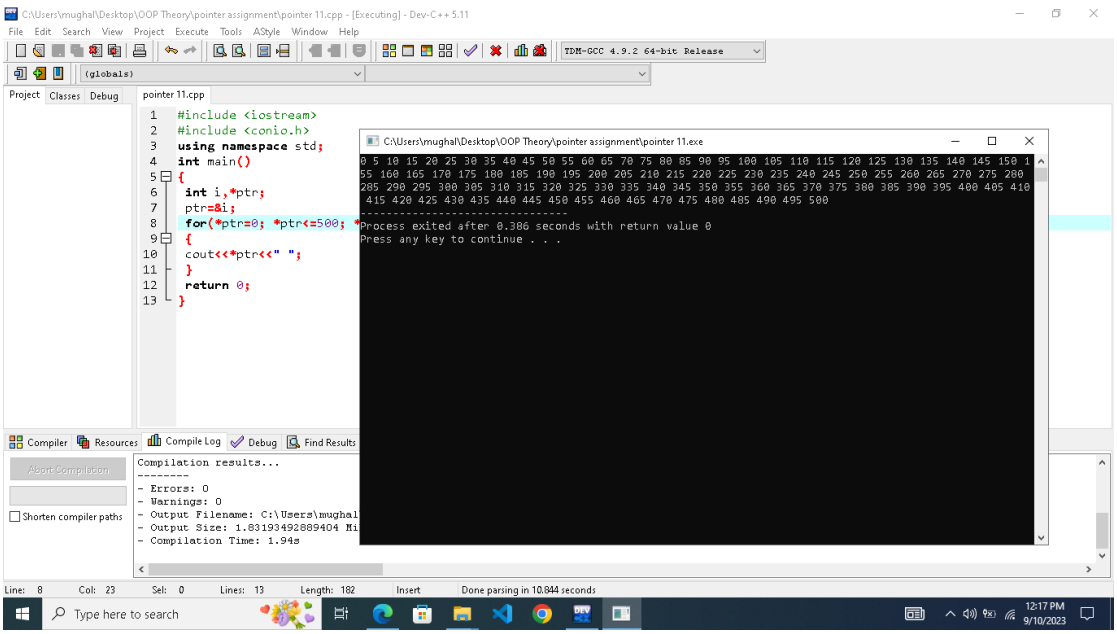


Program 11

```
#include <iostream>
#include <conio.h>
using namespace std;
int main()
{
 int i,*ptr;
 ptr=&i;
 for(*ptr=0; *ptr<=500; *ptr=*ptr+5)
 {
```

```
 cout<<*ptr<<" ";
 }
 return 0;
}
```

Output

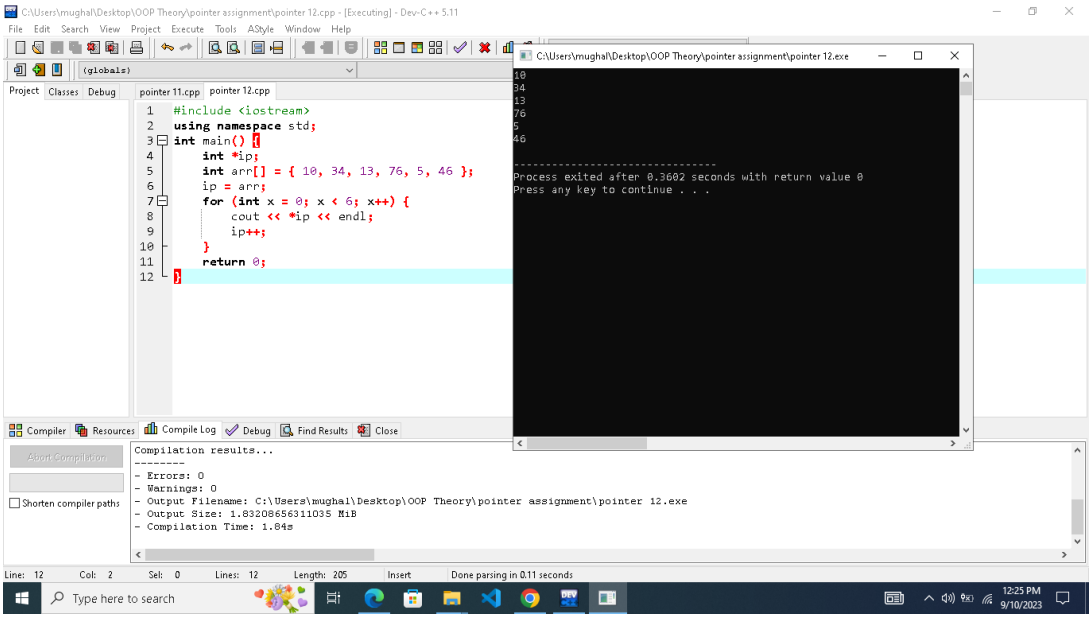


Program 12

```
#include <iostream>
using namespace std;
int main() {
        int *ip;
        int arr[] = { 10, 34, 13, 76, 5, 46 };
        ip = arr;
        for (int x = 0; x < 6; x++) {
                cout << *ip << endl;
```

```
        ip++;
    }
    return 0;
}
```

Output

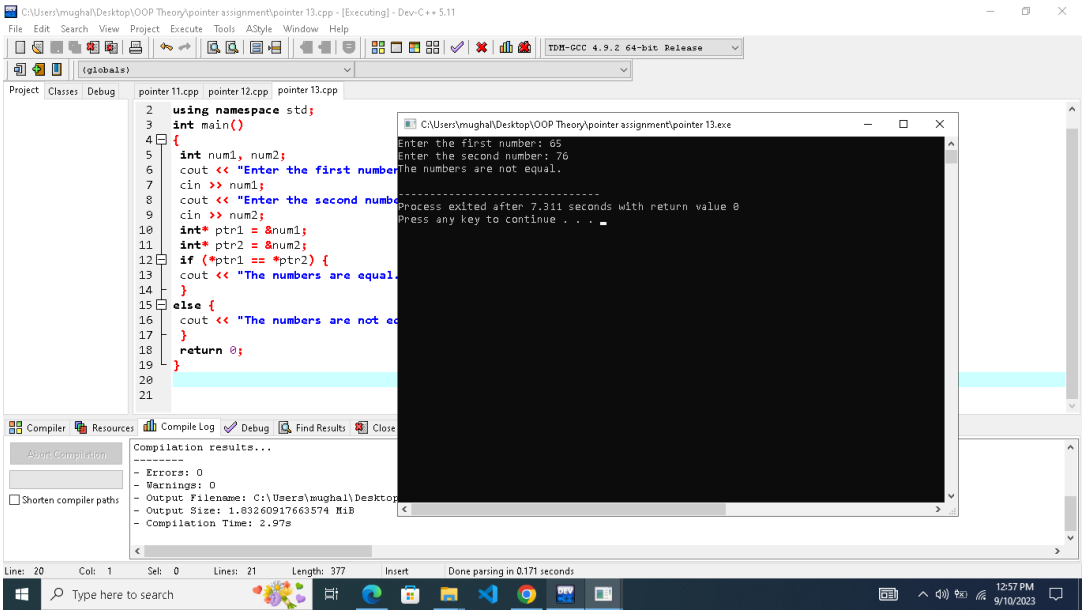


Program 13

```
#include <iostream>
using namespace std;
int main()
{
 int num1, num2;
 cout << "Enter the first number: ";
 cin >> num1;
 cout << "Enter the second number: ";
 cin >> num2;
 int* ptr1 = &num1;
```

```
 int* ptr2 = &num2;
 if (*ptr1 == *ptr2) {
 cout << "The numbers are equal." << endl;
 }
else {
 cout << "The numbers are not equal." << endl;
 }
 return 0;
}
```

Output

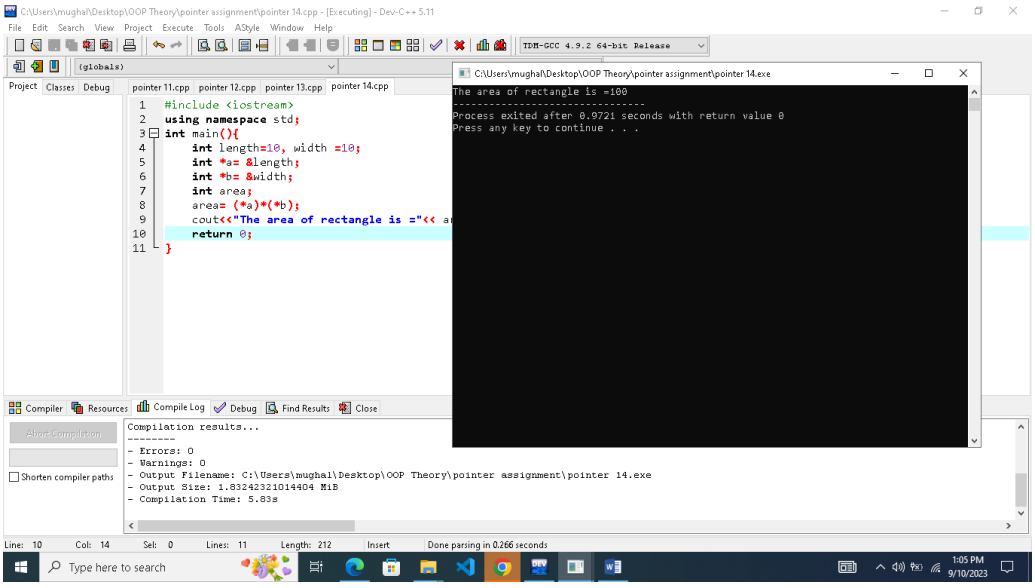


Program 14

```
#include <iostream>
using namespace std;
int main(){
        int length=10, width =10;
```

```
    int *a= &length;
    int *b= &width;
    int area;
    area= (*a)*(*b);
    cout<<"The area of rectangle is ="<< area;
    return 0;
}
```

Output



Program 15

```
#include <iostream>
using namespace std;
int main() {
 int ar[5], i, sum = 0;
 int *ptr;
 cout << "Enter any 5 numbers :";
 for (i = 0; i < 5; i++) {
```

```
cin >> ar[i];
}
ptr = ar;
for (i = 0; i < 5; i++) {
                    sum = sum + *(ptr + i);
}
cout << "\nSum of the array elements :" << sum;
return 0;
}
```

Output