



Fundamental of Programing

Lab Manual # 05

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1. Write a program in C + to find LCM of any two numbers using HCF

```
#include <iostream>
using namespace std;

int main() {
    int n1, n2, temp, hcf, lcm, a, b;

    cout << "Enter first number "<<endl;
    cin >> n1;

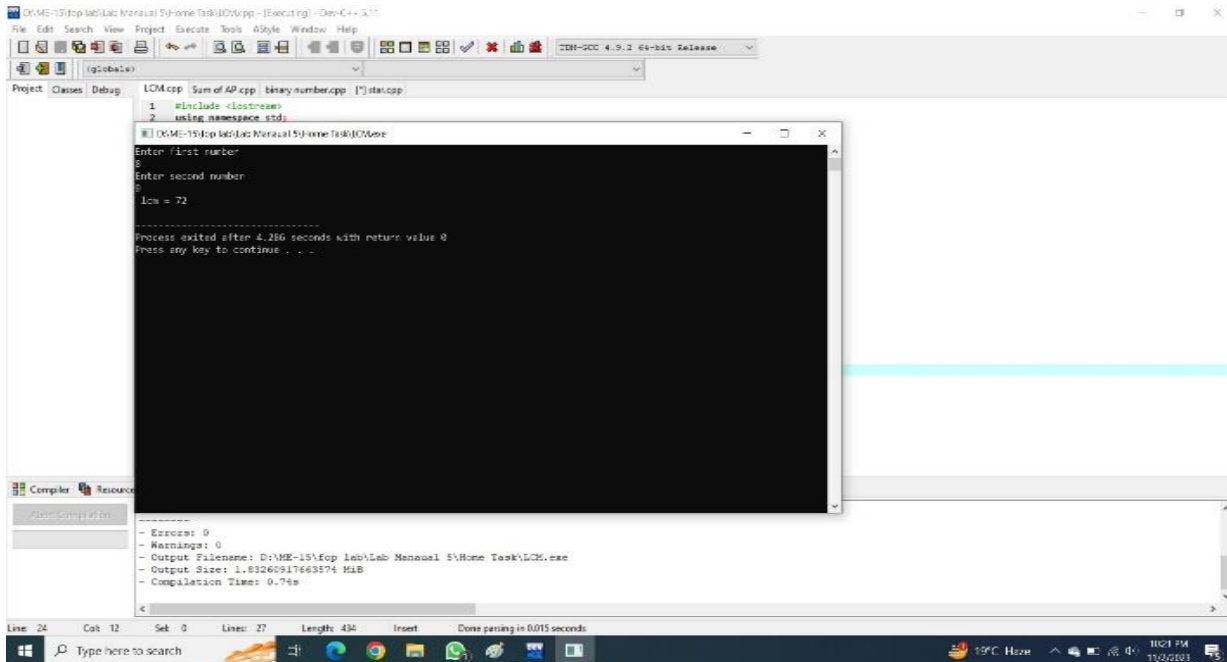
    cout << "Enter second number "<<endl;
    cin >> n2;

    a = n1;
    b = n2;

    while( b!= 0)
    {
        temp = b;
        b = a % b;
        a = temp;
    }
    hcf = a;

    lcm = (n1*n2)/hcf;
    cout<<" lcm = "<< lcm << endl;

    return 0;
}
```



2. Write a program in C ++ to find out the sum of an Arithmetic progression series.

```
#include <iostream>
using namespace std;
```

```
int main()
{
    int a, d, n;
    float sum;

    cout << "Enter the first term(a) "<< endl;
    cin >> a;

    cout << "Enter the common difference(d) "<< endl;
    cin >> d;
```



```
cout << "Enter the number of terms(n) "<< endl;
```

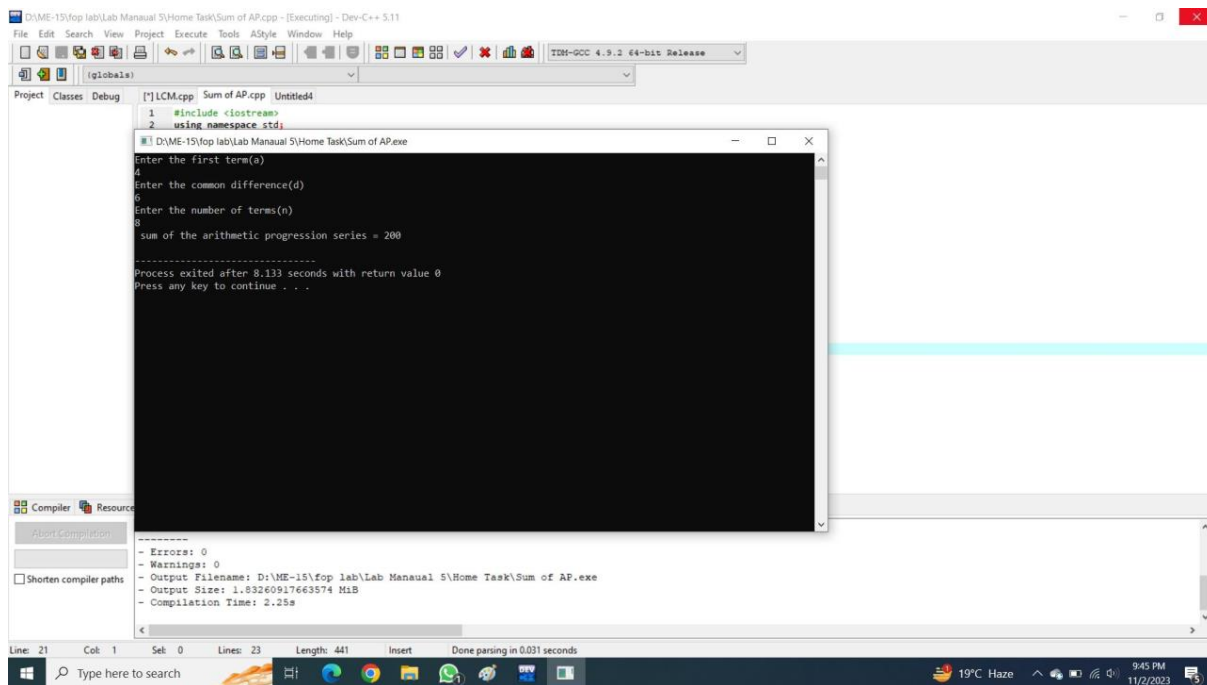
```
cin >> n;
```

```
sum = (n/2) * (2 * a + (n - 1) * d);
```

```
cout << " sum of the arithmetic progression series = " << sum << endl;
```

```
return 0;
```

```
}
```



3. Write a program in C ++ to create a diamond

```
#include<iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
for( int i = 0 ; i <= 5; i++) {
```



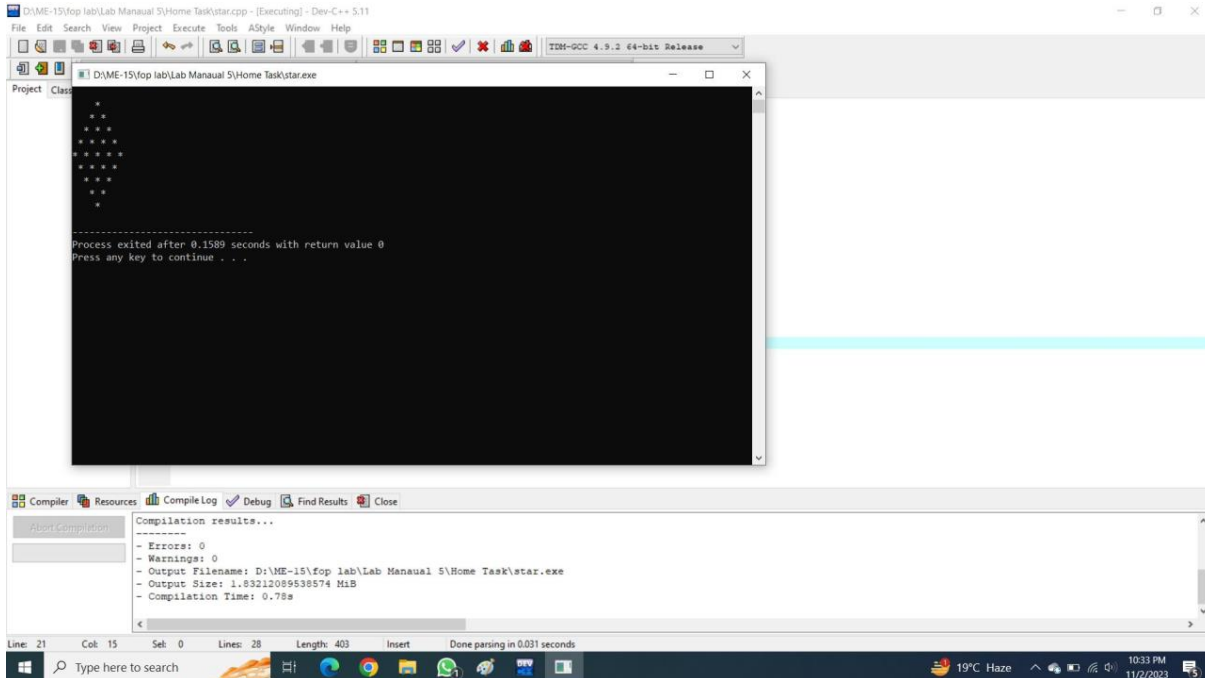
```
        for( int j = 1; j <= 5 - i; j++){
            cout<< " ";
        }
    for( int k = 1; k <= i ; k++){
        cout<< "* ";
    }
    cout<<endl;
}

for( int i = 4 ; i >= 1; i-- ){
    for( int j =1 ; j <= 5-i ; j++){
        cout<< " ";
    }

    for( int k = 1; k <= i ; k++){
        cout<< "* ";
    }
    cout<<endl;
}

return 0;

}
```



4. Write a program in C ++ to convert a decimal number to binary number.

```
#include<iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
int decimal, binary = 0, remainder, product = 1;
```

```
cout << "Enter the number in decimal form " << endl;
```

```
cin >> decimal;
```

```
while( decimal != 0 ){
```

```
    remainder = decimal % 2;
```

```
    binary = binary + ( remainder * product );
```



```
decimal = decimal / 2;  
product = product * 10;  
}  
cout << " binary form of number is = "<< binary << endl;  
return 0;  
}
```

