

# **Fundamental of Programing**

Lab Manual # 05

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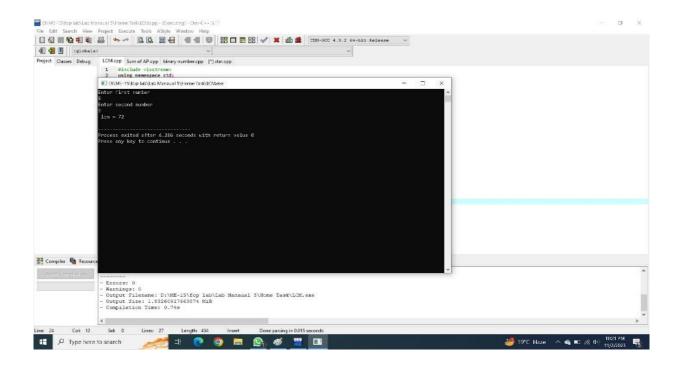
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#### 1. Write a program in C + to find LCM of any two numbers using HCF

```
#include <iostream>
using namespace std;
int main() {
  int n1, n2, temp, hcf, lcm, a, b;
  cout << "Enter first number "<<endl;</pre>
  cin >> n1;
  cout << "Enter second number "<<endl;</pre>
  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;
}
```



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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;
```



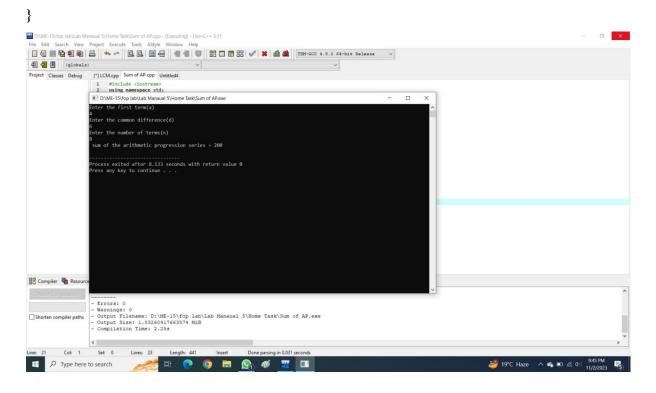
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cout << "Enter the number of terms(n) "<< endl; cin >> n;

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

cout << " sum of the arithmetic progression series = " << sum << endl;</pre>

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++ ){</pre>
```



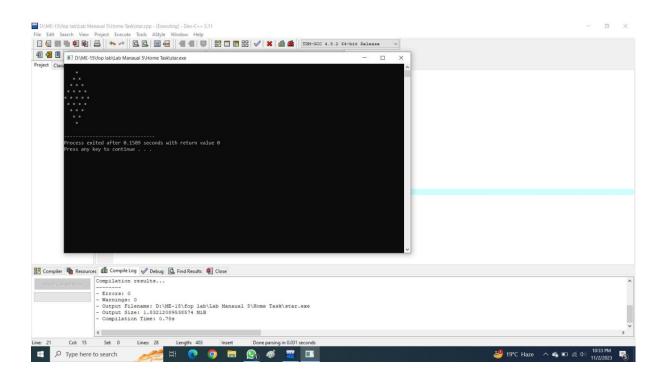
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```
for( int j = 1; j \le 5 - i; j++){
               cout<< " ";
       for( int k = 1; k \le i; k++){
       cout<< "* ";
       cout << endl;
}
       for( int i = 4; i \ge 1; i - 1)
               for( int j = 1 ; j \le 5-i ; j++){
               cout<< " ";
               }
       for( int k = 1; k \le i; k++){
       cout<< "* ";
       cout << endl;
}
       return 0;
```

}



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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 );
}
```



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

⊕ ☐ Enter the number in decimal form

          rocess exited after 3.944 seconds with return value \theta ress any key to continue . . .
  Compiler a Resources Compile Log Debug 🗓 Find Results 🛍 Close
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- Output Sizes: 1.83260917663574 M1B
- Compilation Time: 0.778
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```

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