Home task no: 5

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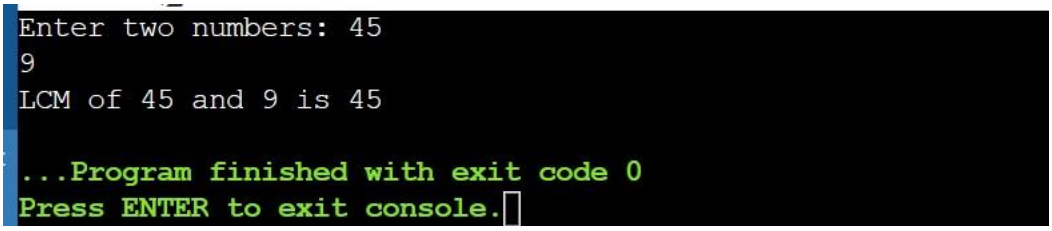
Task no: 1

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

// Function to calculate HCF of two numbers
int hcf(int a, int b) {     if (b == 0)         return
a;     return hcf(b, a % b);
```

```
}

 int lcm(int a, int b) {     return (a * b) / hcf(a,
b);
}

int main() {     int
num1, num2;
   cout << "Enter two numbers: ";
cin >> num1 >> num2;
   cout << "LCM of " << num1 << " and " << num2 << " is " << lcm(num1,
num2);
   return 0;
}
```

Output:

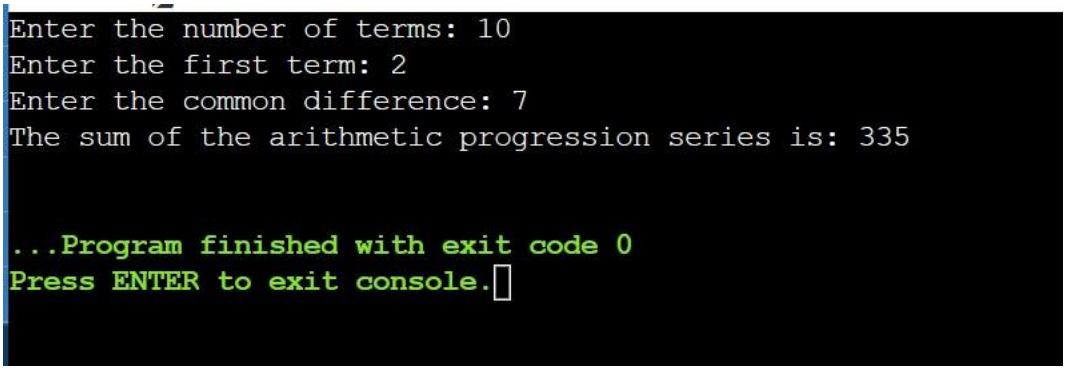


Task no: 2

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

```
int main() {
int n, a, d;
   cout << "Enter the number of terms: ";
cin >> n;
   cout << "Enter the first term: ";
cin >> a;
   cout << "Enter the common difference: ";
cin >> d;


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


   cout << "The sum of the arithmetic progression series is: " << sum << endl;


   return 0;
}
```

Output:



Task no: 3 #include

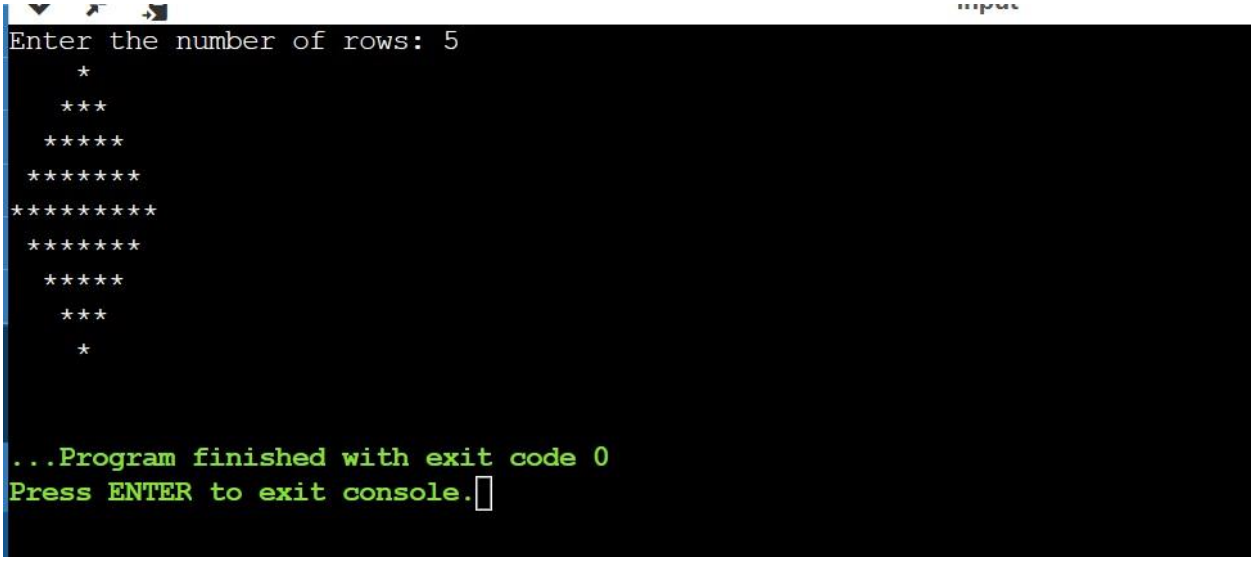
<iostream> using

namespace std;

```
int main() {     int n, i,
j, space = 1;
   cout << "Enter the number of rows: ";
cin >> n;     space = n - 1;     for (j = 1; j
<= n; j++) {        for (i = 1; i <= space;
i++)
          cout << " ";        space--
;        for (i = 1; i <= 2 * j - 1;
i++)           cout << "*";
cout << "\n";
   }
   space = 1;     for (j = 1; j <=
n - 1; j++) {        for (i = 1; i
<= space; i++)           cout <<
" ";        space++;
       for (i = 1; i <= 2 * (n - j) - 1; i++)
cout << "*";        cout << "\n";
   }
```

```
    return 0;
}
```

Output:



Task no: 4

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

int main() {
    int num, binary = 0, i = 1, remainder;

    cout << "Enter a decimal number: ";
cin >> num;
```

```
   while (num != 0) {
remainder = num % 2;
num = num / 2;
       binary = binary + (remainder * i);
i = i * 10;
   }

   cout << "Equivalent binary number: " << binary << endl;

   return 0;
}
```

Output: