



Fundamentals of Programming (LAB)

Home Task (Lab Manual 5)

25th November 2023

Name	Muhammad Abdullah Qureshi
Batch	ME 15
Section	A
Roll No	456523

TASK # 1

```
#include <iostream>

using namespace std;

int main()
{
    int i, n1, n2, j, hcf = 0, lcm;

    cout << " Input 1st number for LCM: ";
    cin >> n1;
    cout << " Input 2nd number for LCM: ";
    cin >> n2;
    if(n1<n2){
        j=n1;
    }
    else if(n1>n2){
        j=n2;
    }

    j = (n1 < n2) ? n1 : n2;
    for (i = 1; i <= j; i++) {

        if (n1 % i == 0 && n2 % i == 0) {
            hcf = i;
        }
    }

    lcm = (n1 * n2) / hcf;
    cout << " The LCM of " << n1 << " and " << n2 << " is: " << lcm << endl;

    return 0;
}
```

TASK 1 CONSOLE

```
Input 1st number for LCM: 71  
Input 2nd number for LCM: 56  
The LCM of 71 and 56 is: 3976
```

TASK # 2

```
#include <iostream>

using namespace std;

int main()
{
    int a, d, nmax, count, vmax;

    int sum = 0;

    cout << " Input  the starting number of the series: ";
    cin >> a;

    cout << " Input the number of items for  the series: ";
    cin >> nmax;

    cout << " Input  the common difference of series: ";
    cin >> d;

    sum = (nmax * (2 * a + (nmax - 1) * d)) / 2;
    vmax = a + (nmax - 1) * d;

    cout << " The Sum of the series is : " << endl;

    count=a;
    while(count<vmax){
        cout<<count<<" + ";
        count=count+d;

    }

    cout << vmax << " = " << sum << endl;

    return 0;
}
```

TASK 2 CONSOLE

```
Input the starting number of the series: 2
Input the number of items for the series: 6
Input the common difference of series: 4
The Sum of the series is :
2 + 6 + 10 + 14 + 18 + 22 = 72
```

```
#include <iostream>

using namespace std;

int main(){

    int i, j, k, crow, row;

    cout<<"Please Enter Number of Rows: ";

    cin>>row;

    crow=row;

    for(i=1; i<=row; i++){

        crow=crow-1;

        for(j=crow; j>0; j--){

            cout<<" ";

        }

        for(k=1; k<=2*i-1; k++){

            cout<<"*";

        }

        cout<<endl;

    }

    crow=0;

    for(i=row; i>0; i--){

        for(j=0; j<crow; j++){

            cout<<" ";

        }

        for(k=1; k<=2*i-1; k++){

            cout<<"*";

        }

        crow=crow+1;

        cout<<endl

    }

    return 0;

}
```

TASK 3 CONSOLE

[illegible]

TASK #4

```
#include <iostream>

using namespace std;

int main(){

    int i, j, dec;

    int array1 [8];

    for(j=0; j<9; j++){

        array1[j]=0;

    }

    cout<<"Enter a Decimal Number from 0-255: ";

    cin>>dec;

    while (dec>0){

        array1[i++]=dec%2;

        dec=dec/2;

    }

    for(i=8; i>0; i--){

        cout<<array1[i];

    }

}
```


TASK 4 CONSOLE

```
Enter a Decimal Number from 0-255: 150  
01001011
```