LAB MANUAL 6

LAB TASKS:

1. Generate the Fibonacci sequence using nested loops.

```cpp
#include <iostream>
using namespace std;
int main()
{
    int x=0,y=1,z;
    int n;
    cout<<"Enter the range you want for fibonacci series: ";
    cin>>n;
    for(int i=0;i<n;i++)
    {
        for(int j=0;j<i;j++)
        {
            cout<<x<<",";
            z = x+y;
            x=y;
            y=z;
        }
    }
    return 0;
}
```

```
D:\FOP\lab manuals\lb man6.exe
Enter the range you want for fibonacci series: 5
0,1,1,2,3,5,8,13,21,34,
--------------------------------
Process exited after 14.94 seconds with return value 0
Press any key to continue . . .
```

2. Create Floyd's triangle with nested loops.

```cpp
#include <iostream>
using namespace std;
int main()
{
    int n=1,rows;
    cout<<"Enter the number of rows for Floyds triangle: ";
    cin>>rows;
    for(int i=1;i<=rows;i++)
    {
        for(int j=1;j<=i;j++)
        {
            cout<<n<<" ";
            n++;
        }
        cout<<endl;
    }
    return 0;
}
```

```
D:\FOP\lab manuals\lab mn6.exe
Enter the number of rows for Floyds triangle: 4
1
2 3
4 5 6
7 8 9 10

--------------------------------
Process exited after 21.64 seconds with return value 0
Press any key to continue . . .
```

HOME TASKS:

1. Write a program using break or continue statement that only adds prime numbers from 1 to 50 and display the sum on screen.

```cpp
#include <iostream>
using namespace std;
    int main() {
    int sum = 0;
    for (int i=2;i<=50;i++)
    {
        for(int j=2;j<=i;j++)
        {
            if(j%i==0 && i!=j)
            {
                break;
            }
            if(i==j)
            {
                sum=sum+i;
            }

        }
    }

    cout<<"The sum of prime numbers from 1 to 50 is: "<<sum;
    return 0;
}
```

```
D:\FOP\lab manuals\lll.exe
The sum of prime numbers from 1 to 50 is: 1274
--------------------------------
Process exited after 10.38 seconds with return value 0
Press any key to continue . . .
```

2. Write a program in C++ to create the following pattern.

   1
   1 2
   1 2 3
   1 2 3 4
   1 2 3 4 5

```cpp
#include <iostream>
using namespace std;
int main()
{
    for(int i=1;i<=5;i++)
    {
        for(int j=1;j<=i;j++)
        {
            cout<<j<<" ";
        }
        cout<<endl;
    }
    return 0;
}
```

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5

--------------------------------
Process exited after 10.79 seconds with return value 0
Press any key to continue . . .
```

3. Write a C++ program to print:

   1
   2 2
   4 4 4 4
   6 6 6 6 6 6

```cpp
#include <iostream>
using namespace std;
    int main() {
        cout<<1<<endl;
        for(int i=1;i<=6;i++)
        {
            for(int j=1;j<=i;j++)
            {
                if(i%2==0)
                {
                    cout<<i<<" ";
                }
            }
            cout<<endl;
        }
    return 0;
}
```

```
D:\FOP\lab manuals\lll.exe
1

2 2

4 4 4 4

6 6 6 6 6 6

--------------------------------
Process exited after 13.96 seconds with return value 0
Press any key to continue . . .
```