

Lab Manual 6

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Section: B

Lab task 1:

```
#include <iostream>
using namespace std;
int main() {
    int n;

    cout << "Enter the number of terms in the Fibonacci sequence: ";
    cin >> n;

    int first = 0, second = 1;

    cout << "Fibonacci Sequence: ";

    cout << first << " " << second << " ";

    for (int i = 2; i < n; ++i) {
        int next = first + second;
        std::cout << next << " ";

        first = second;
        second = next;
    }

    return 0;
}
```

Output:

```
Enter the number of terms in the Fibonacci sequence: 8
Fibonacci Sequence: 0 1 1 2 3 5 8 13
-----
Process exited after 5.403 seconds with return value 0
Press any key to continue . . .
```

Lab task 2:

```
#include <iostream>
using namespace std;
int main() {
    int n;

    cout << "Enter the number of rows for Floyd's Triangle: ";
    cin >> n;

    int count = 1;

    cout << "Floyd's Triangle:" << endl;

    for (int i = 1; i <= n; ++i) {
        for (int j = 1; j <= i; ++j) {
            cout << count << " ";
            ++count;
        }
        cout << endl;
    }

    return 0;
}
```

Output:

```
Enter the number of rows for Floyd's Triangle: 6
Floyd's Triangle:
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
16 17 18 19 20 21
```

Home task 1:

```
#include <iostream>
using namespace std;
bool isPrime(int num) {
    if (num <= 1) {
        return false;
    }

    for (int i = 2; i <= num / 2; ++i) {
        if (num % i == 0) {
            return false;
        }
    }

    return true;
}

int main() {
    int sum = 0;

    for (int i = 1; i <= 50; ++i) {
        if (!isPrime(i)) {
            continue;
        }

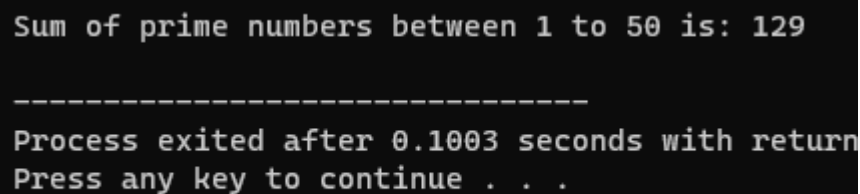
        sum += i;

        if (sum > 100) {
            break;
        }
    }

    cout << "Sum of prime numbers between 1 to 50 is: " << sum << endl;

    return 0;
}
```

Output:

A screenshot of a terminal window with a black background and white text. The first line shows the output of the program: "Sum of prime numbers between 1 to 50 is: 129". Below this, there is a horizontal line of dashes. The next two lines are: "Process exited after 0.1003 seconds with return" and "Press any key to continue . . .".

```
Sum of prime numbers between 1 to 50 is: 129
-----
Process exited after 0.1003 seconds with return
Press any key to continue . . .
```

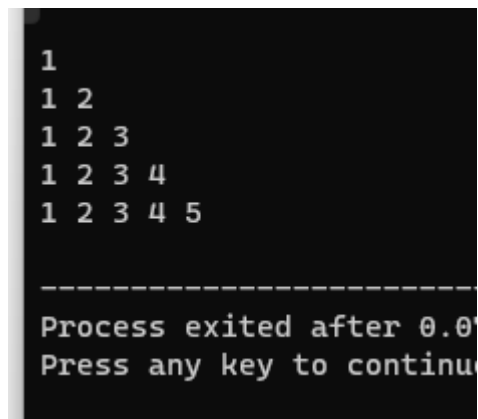
Home task 2:

```
#include <iostream>
using namespace std;
int main() {
    int n = 5;

    for (int i = 1; i <= n; ++i) {
        for (int j = 1; j <= i; ++j) {
            cout << j << " ";
        }
        cout << endl;
    }

    return 0;
}
```

Output:



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

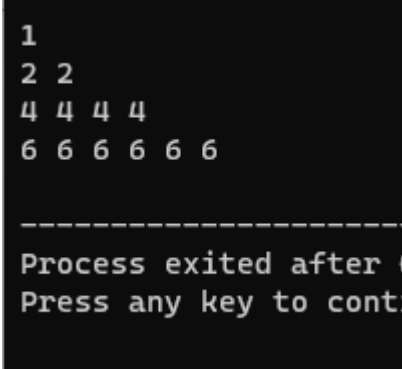
-----
Process exited after 0.0
Press any key to continu
```

Home task 3:

```
#include <iostream>
using namespace std;
int main() {
    int rows = 3;
    cout<<"1"<<endl;
    for (int i = 1; i <= rows; ++i) {
        for (int j = 1; j <= i * 2; ++j) {
            cout << i * 2 << " ";
        }
        cout <<endl;
    }

    return 0;
}
```

Output:



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

-----
Process exited after 0 seconds
Press any key to continue
```