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;
}
```

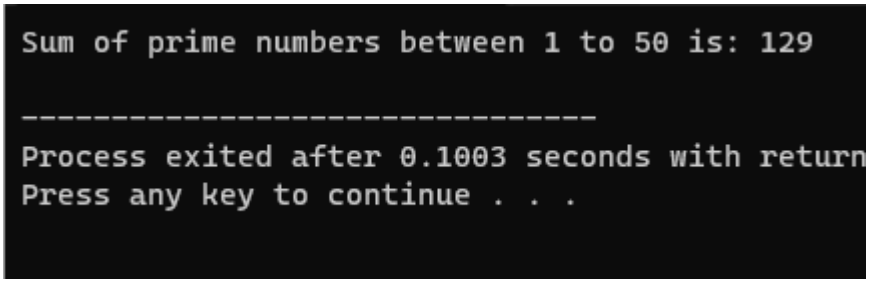
Output:

```
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;
}
```

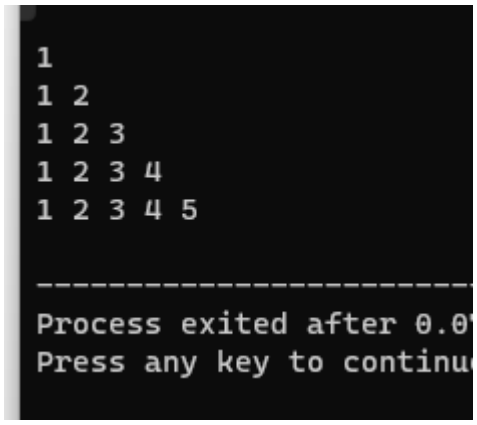
Output:



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:



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: