Computer Systems & Programming

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Lab Manual # 6

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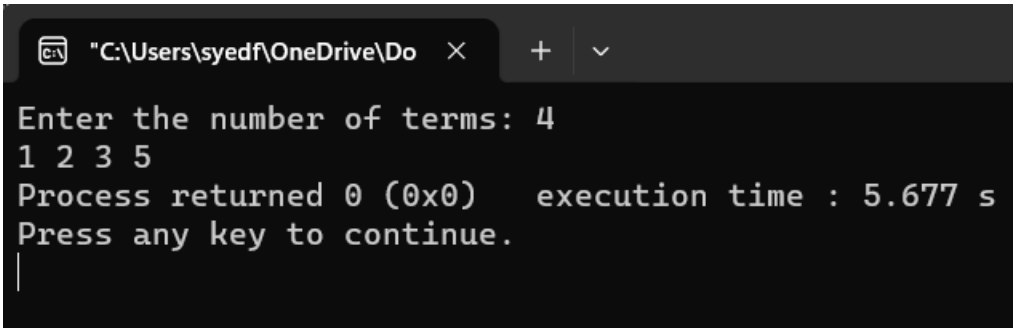
Lab Task# 1: *Generate the Fibonacci sequence using nested loops.*

Code:

```
#include <iostream>

using namespace std;

int main() {
  int n;
  cout << "Enter the number of terms: ";
  cin >> n;

  int a = 0, b = 1, f;

  for (int i = 0; i < n; i++) {
    f = a + b;
    cout << f << " ";
    a = b;
    b = f;
  }

  return 0;
}
```

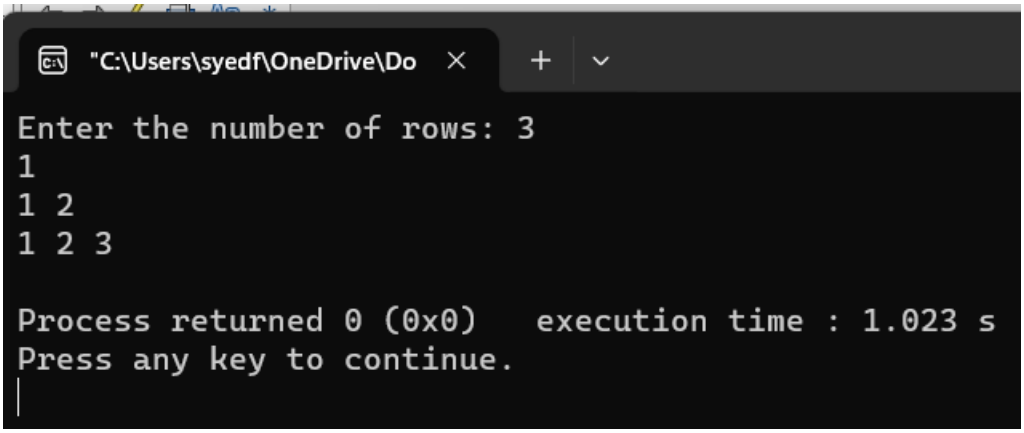


Lab Task# 2: *Create Floyd's triangle with nested loops.*

Code:

```
#include <iostream>

using namespace std;

int main() {

  int n;

  cout << "Enter the number of rows: ";
```

```
  cin >> n;
  for (int i = 1; i <= n; i++) {
    for (int j = 1; j <= i; j++) {
      cout << j << " ";
    }
    cout << endl;
  }
  return 0;
}
```

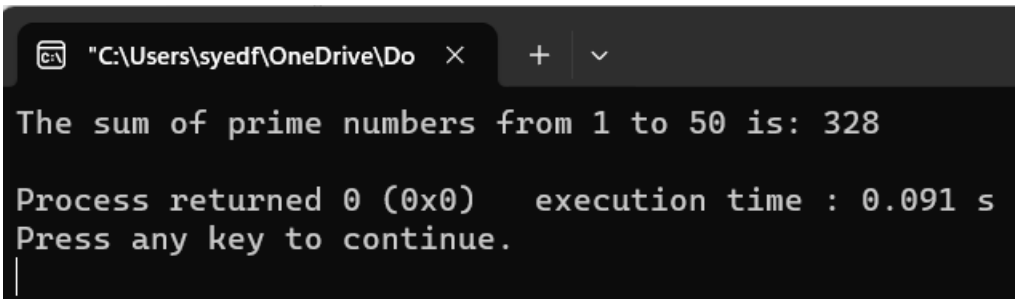


Home Task# 1: *Write a program using break or continue statement that only adds prime numbers from 1 to 50 and display the sum on screen.*

Code:

```
#include <iostream>

using namespace std;

int main() {
  int sum = 0;
  int i = 2;

  while (i <= 50) {
```

```
    bool isPrime = true;

    for (int j = 2; j * j <= i; j++) {
      if (i % j == 0) {
        isPrime = false;
        break;
      }
    }

    if (isPrime) {
      sum += i;
    }

    i++;
  }

  cout << "The sum of prime numbers from 1 to 50 is: " << sum << endl;

  return 0;
}
```



Home Task# 2: Write a program in C++ to create the following pattern.

11
2
1 2 3
1 2 3 4
1 2 3 4 5

Code:

```
#include <iostream>

using namespace std;

int main() {
  for (int i = 0; i <= 4; i++) {
```

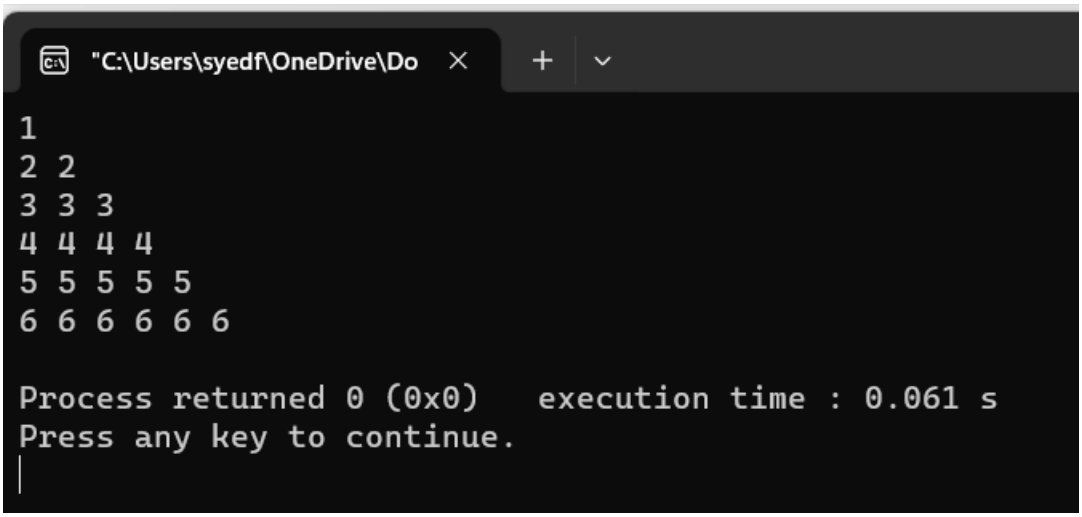
```
    for (int j = 1; j <= i + 1; j++) {
      cout << j << " ";
    }
    cout << endl;
  }
  return 0;
}
```

Home Task# 3: *Write a C++ program to print:*

12
2
4 4 4 4
6 6 6 6 6 6

Code:

```
#include <iostream>

int main() {
    int count = 1;
    while (count <= 6) {
        for (int i = 1; i <= count; i++) {
            std::cout << count << " ";
        }
        std::cout << std::endl;
        count++;
    }

    return 0;
}
```


"C:\Users\syedf\OneDrive\Do
1
2 2
3 3 3
4 4 4 4
5 5 5 5 5
6 6 6 6 6 6
Process returned 0 (0x0)   execution time : 0.061 s
Press any key to continue.