



Computer Systems and Programming Lab Manual 6

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Class: ME-15 C

Lab Task

Q1. Generate the Fibonacci sequence using nested loops.

```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      int x;
6      int a = 1;
7      int b = 1;
8      int c;
9      cout << "How many terms of the Fibonacci sequence do you want?" << endl;
10     cin >> x;
11     cout << a << endl;
12     cout << b << endl;
13     for (int i=1; i<=x; i++) {
14         c=a+b;
15         a=b;
16         b=c;
17         cout << c << endl;
18     }
19     return 0;
20 }
21
```

```
How many terms of the Fibonacci sequence do you want?
10
1
1
2
3
5
8
13
21
34
55
89
144
```

```
Process returned 0 (0x0)   execution time : 1.882 s
Press any key to continue.
```

Q2. Create Floyd's triangle using nested loops.

```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      int r;
6      cout << "Enter the number of rows for Floyd's Triangle:" << endl;
7      cin >> r;
8      int x=1;
9      for (int i=1; i<=r; i++) {
10         for (int j=1; j<=i; j++) {
11             cout << x << " ";
12             x++;
13         }
14         cout << endl;
15     }
16
17     return 0;
18 }
19
```

```
Enter the number of rows for Floyd's Triangle:
10
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31 32 33 34 35 36
37 38 39 40 41 42 43 44 45
46 47 48 49 50 51 52 53 54 55

Process returned 0 (0x0)    execution time : 2.373 s
Press any key to continue.
|
```