



**NATIONAL UNIVERSITY OF SCIENCES AND
TECHNOLOGY**

PROGRAMMING FUNDAMENTALS

LAB MODULE # 6

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LAB TASK:

Q 1:

```
#include <iostream>
using namespace std;
int main() {
    int n, a = 1, b = 1, c;
    cout << "Enter the number of terms
you want: ";
    cin >> n;
    for (int i = 0; i < n; i++) {
        cout << a << " ";
        c = a + b;
        a = b;
        b = c;
    }
    return 0;
}
```

Q 1 (results):

```
7      for (int i = 0; i < n; i++) {
8          cout << a << " ";
9          c = a + b;
10         a = b;
11         b = c;
12     }
13     return 0;
main
main.cpp x
C:\papers\main.exe
Enter the number of terms you want:5
1 1 2 3 5
Process finished with exit code 0
```

Q2:

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

Q 2 (results):

```
10     }
11     cout << endl;
12 }
13 return 0;
14 }
15
```

main

main.cpp x

C:\papers\main.exe

Enter the number of rows you want:6

```
1
1 1
1 1 1
1 1 1 1
```

HOME TASK:

Q 1:

```
#include <iostream>
using namespace std;
int main() {
    int sum = 0;
    for (int i = 1; i <= 50; ++i) {
        bool isPrime = true;
        for (int j = 2; j * j <= i;
++j) {
            if (i % j == 0) {
                isPrime = false;
                break;
            }
        }
        if (isPrime) {
            sum += i;
        }
        if (sum > 100) {
            break;
        }
    }
    cout << "Sum = " << sum << endl;

    return 0;
}
```

Q 1 (result):

```
21  
22     return 0;  
23 }  
24
```

main

main.cpp x

:

C:\papers\main.exe

Sum = 101

Process finished with exit code 0

Q2:

```
#include <iostream>
using namespace std;
int main() {
    int numRows;
    cout << "Enter the number of rows
you want: ";
    cin >> numRows;
    cout << "Pattern:" << endl;
    for (int i = 1; i <= numRows; ++i)
    {
        for (int j = 1; j <= i; ++j) {
            cout << j << " ";
        }
        cout << endl;
    }
    return 0;
}
0;
```


Q 2 (result):

```
10      cout << j << " ";
11      }
12      cout<<endl;
13  }
14  return 0;
```

main

main.cpp x

:

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

Process finished with exit code 0

Q3:

```
#include <iostream>
using namespace std;
int main() {
    int Rows;
    cout << "Enter the number of rows
for the pattern: ";
    cin >> Rows;
    cout << "Pattern:" << endl;
    int value = 1;
    for (int i = 1; i <= Rows; ++i) {
        for (int j = 1; j <= i; ++j) {
            cout << value << " ";
            value += 2;
        }
        cout << endl;
    }

    return 0;
}
```

Q 3 (result):

```
9         for (int i = 1; i <= rows; ++i) {
10             for (int j = 1; j <= i; ++j) {
11                 cout << value << " ";
12                 value += 2;
13             }
14             cout << endl;
15         }
16
17     return 0;
}

main

main.cpp x
C:\papers\main.exe
Enter the number of rows for the pattern:4
Pattern:
1
```