



NUST

NATIONAL UNIVERSITY
OF SCIENCES & TECHNOLOGY

Computer Programming Lab

Manuel4 home tasks

Submitted by:

Shah Jahan khan

469192 (section C)

Submitted to:

Sir Affan Tariq

Sir Zeeshan

1. Write a program in C++ that prints the numbers from 1 to 150 except the multiples of 10.
Make use of the continue statement.

```
#include <iostream>
```

```
using namespace std;
```

```
int main () {
```

```
    for (int i=1; i<=150; i++) {
```

```
        if (i % 10 == 0) {
```

```
            continue;
```

```
        }
```

```
        cout << i << " ";
```

```
    }
```

```
    return 0;
```

```
}
```

```
/tmp/eNp3ok6aH0.o
1 2 3 4 5 6 7 8 9 11 12 13 14 15 16 17 18 19 21 22 23 24 25 26 27 28 29 31 32 33 34 35
36 37 38 39 41 42 43 44 45 46 47 48 49 51 52 53 54 55 56 57 58 59 61 62 63 64 65
66 67 68 69 71 72 73 74 75 76 77 78 79 81 82 83 84 85 86 87 88 89 91 92 93 94 95
96 97 98 99 101 102 103 104 105 106 107 108 109 111 112 113 114 115 116 117 118
119 121 122 123 124 125 126 127 128 129 131 132 133 134 135 136 137 138 139 141
142 143 144 145 146 147 148 149
```

2. Write a C++ program to find the sum of digits of a number.

The sum of digits means adding all the digits of any number, for example, we take any number like 358. Its sum of all digits is 3+5+8=16.

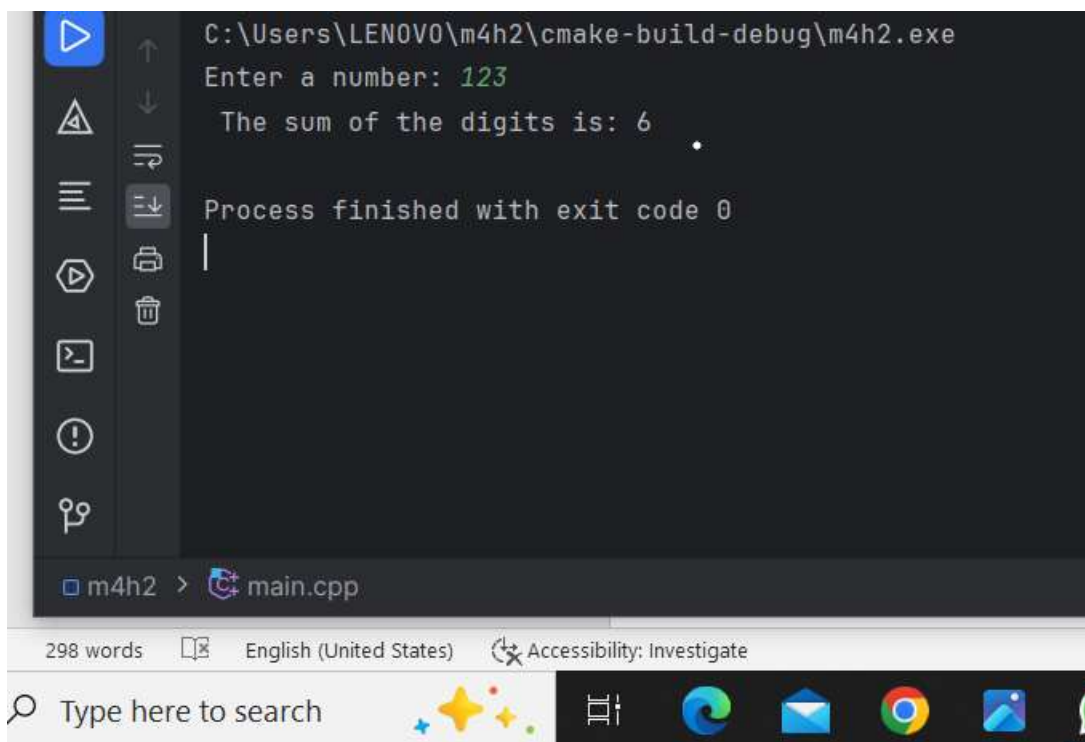
```
#include <iostream>
using namespace std;

int main() {
    int num;
    int sum = 0;

    cout << "Enter a number: "; //input
    cin >> num;

    // while loop
    while (num > 0) {
        int digit = num % 10;
        sum += digit;
        num /= 10;
    }
    // output
    cout << "The sum of the digits is: " << sum << endl;

    return 0;
}
```



The screenshot shows a Windows terminal window with a dark background. The title bar at the top reads "C:\Users\LENOVO\m4h2\cmake-build-debug\m4h2.exe". The terminal output shows the program's execution: it prompts "Enter a number:" where the user has entered "123" in green. The program then outputs "The sum of the digits is: 6". Below this, it says "Process finished with exit code 0". On the left side of the terminal, there is a vertical toolbar with various icons for running, debugging, and file operations. At the bottom of the terminal window, the file path "m4h2 > main.cpp" is visible. Below the terminal window, a Windows taskbar is shown with the search bar containing "Type here to search" and several application icons including the Start menu, Edge browser, Mail, Chrome, and File Explorer. The system tray at the bottom right shows the date and time as "298 words", "English (United States)", and "Accessibility: Investigate".

3. Write a program in C++ to check whether a number is prime or not.

```
#include <iostream>

using namespace std;

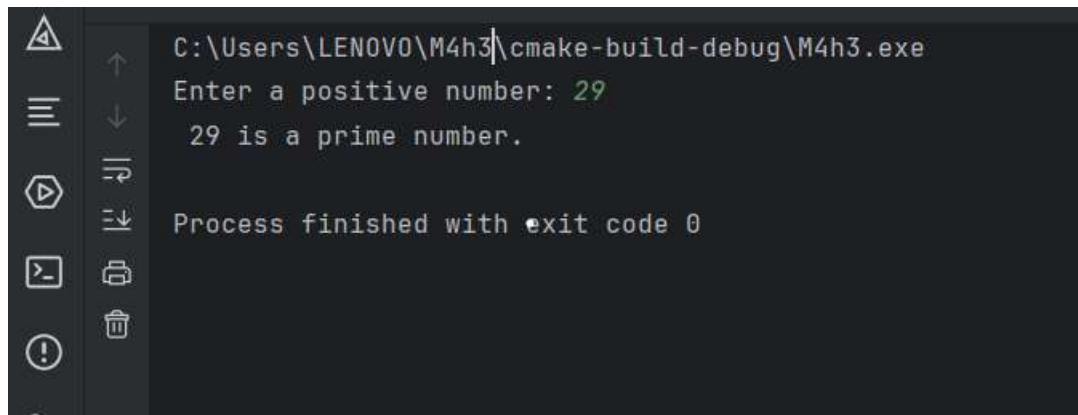
int main () {
    int n;
    int count = 0;

    cout << "Enter a positive number: ";
    cin >> n;

    if (n <= 1) {
        cout << "Prime numbers are greater than 1." << endl;
    }
    else {
        for (int i = 2; i <= n; i++) {
            if (n % i == 0) {
                count++;
            }
        }

        if (count == 1) {
            cout << n << " is a prime number." << endl;
        } else {
            cout << n << " is not a prime number." << endl;
        }
    }

    return 0;
}
```



A screenshot of a Visual Studio Code terminal window. The terminal has a dark background with light gray text. On the left side, there is a vertical toolbar with icons for running, debugging, and other functions. The main area of the terminal displays the following text:

```
C:\Users\LENOVO\M4h3\cmake-build-debug\M4h3.exe
Enter a positive number: 29
    29 is a prime number.

Process finished with exit code 0
```