



**NUST**

**School of Mechanical &  
Manufacturing Engineering**

## **FOP Assignment:**

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**Batch:** ME-15

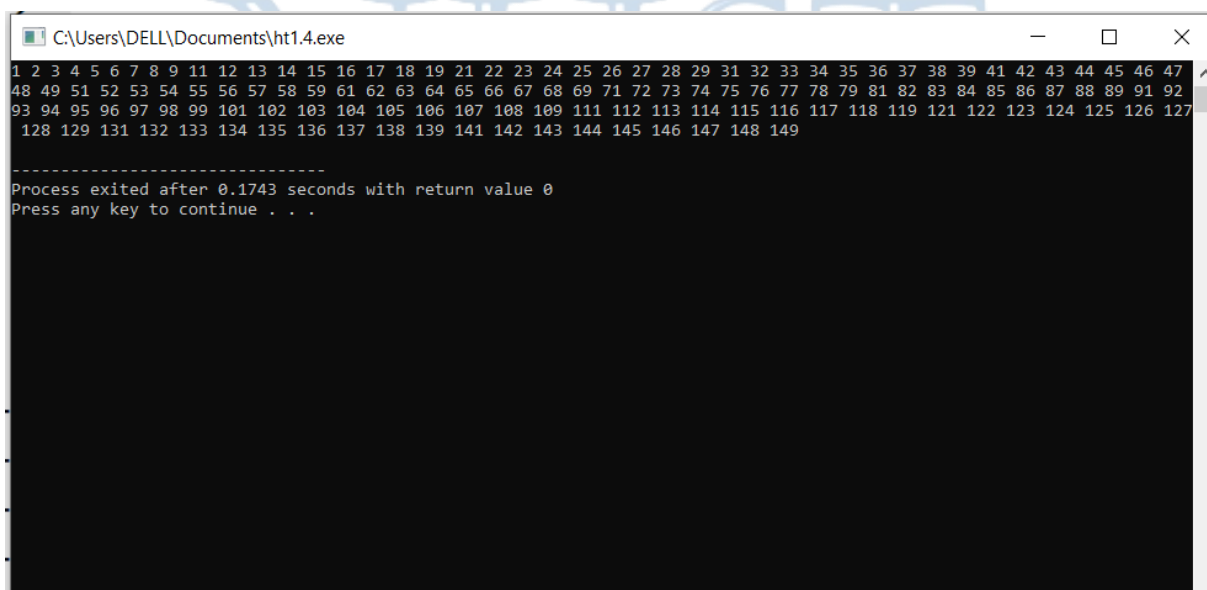
**Section:** A

**Course Instructor:** Dr. Jawad

**Lab instructor:** Sir. Saqib

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.

```
1  #include <iostream>
2
3  using namespace std;
4
5  int main() {
6      for (int i = 1; i <= 150; i++) {
7          if (i % 10 == 0) {
8              continue;
9          }
10         cout << i << " ";
11     }
12     cout << endl;
13
14     return 0;
15 }
```



The screenshot shows a Windows command prompt window titled "C:\Users\DELL\Documents\ht1.4.exe". The window displays the output of the C++ program, which prints numbers from 1 to 150, excluding multiples of 10. The output is as follows:

```
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
```

Below the output, the window shows the message: "Process exited after 0.1743 seconds with return value 0". The prompt "Press any key to continue . . ." is visible at the bottom of the window.

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  $3+5+8=16$ .

```
1  #include <iostream>
2
3  using namespace std;
4
5  int main() {
6      int number, sum = 0;
7      cout << "Enter a number: ";
8      cin >> number;
9
10     while (number > 0) {
11         int digit = number % 10;
12         sum += digit;
13         number /= 10;
14     }
15
16     cout << "The sum of digits of " << number << " is: " << sum << endl;
17
18     return 0;
19 }
```



```
C:\Users\DELL\Documents\ht2.4.exe
Enter a number: 381
The sum of digits of 0 is: 12
-----
Process exited after 3.194 seconds with return value 0
Press any key to continue . . .
```

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

```
1  #include <iostream>
2  #include <cmath>
3  using namespace std;
4
5  int main()
6  {
7      int n;
8      bool is_prime = true;
9      cout << "Enter a positive integer: ";
10     cin >> n;
11     if (n == 0 || n == 1)
12     {
13         is_prime = false;
14     }
15     else // otherwise
16     {
17         for (int i = 2; i <= sqrt(n); i++)
18         {
19             if (n % i == 0)
20             {
21                 is_prime = false;
22                 break;
23             }
24         }
25     }
26     if (is_prime)
27     {
28         cout << n << " is a prime number." << endl;
29     }
30     else
31     {
32         cout << n << " is not a prime number." << endl;
33     }
34     return 0;
35 }
```

```
C:\Users\DELL\Documents\ht3.4.exe
Enter a positive integer: 7
7 is a prime number.
-----
Process exited after 7.664 seconds with return value 0
Press any key to continue . . .
```

