

# FUNDAMENTALS OF PROGRAMMING

## MANUAL 04 HOME TASKS

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**SECTION C**

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## TASK01

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

Make use of the continue statement.

**SOL:**

```
#include <iostream>

using namespace std;

int main() {

    //using 'for' loop with the starting point of variable as 1, going up to 150 with increment of 1.//

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

        if (i % 10 == 0) {

            continue;

            //skipping the number divisible by 10//

        }

        cout << i << " ";

    }

    return 0;

}
```

Output

Clear

/tmp/ORDIlyZyhd.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
```

## TASK02

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

### SOL:

```
#include <iostream>

using namespace std;

int main() {
    int number, sum = 0;           //declaring variables//
    cout << "Enter a number: "; //getting the number from user//
    cin >> number;
    while (number != 0)           //using 'while' loop and running it until the value becomes zero//
    {
        sum += number % 10;       //using '%' operator to deal with the individual digits//
        number /= 10;            //using '/' operator to get rid of already calculated digit//
    }
    cout << "The sum of the digits is: " << sum << endl;
    return 0;
}
```

### Output

```
/tmp/ORDIlyZyhd.o
Enter a number: 567
The sum of the digits is: 18
|
```

## **TASK 03**

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

### **SOL:**

```
#include <iostream>

using namespace std;

int main() {
    int number;

    cout << "Enter a positive integer: ";

    cin >> number;

    if (number <= 1) {
        cout << number << " is not a prime number." ;    //printing this if the number is zero or negative//
    } else {
        int i;
        for (i = 2; i * i <= number; i++)
            //using 'for' loop with initial value of 2 up to the value of entered number//
        {
            if (number % i == 0) {
                cout << number << " is not a prime number." ;    //printing this if the remainder of number/i is zero//
                break;
            }
        }
        if (i * i > number) {
            cout << number << " is a prime number.";
        }
    }

    return 0; }
```

#### **Output**

```
/tmp/ORDIlyZyhd.o
Enter a positive integer: 79
79 is a prime number.
```