School Of Mechanical & Manufacturing Engineering, (NUST)

Department of Mechanical Engineering

Lab # 04: Fundamentals of Programming, (FOF)

Prepared by:

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Home task:

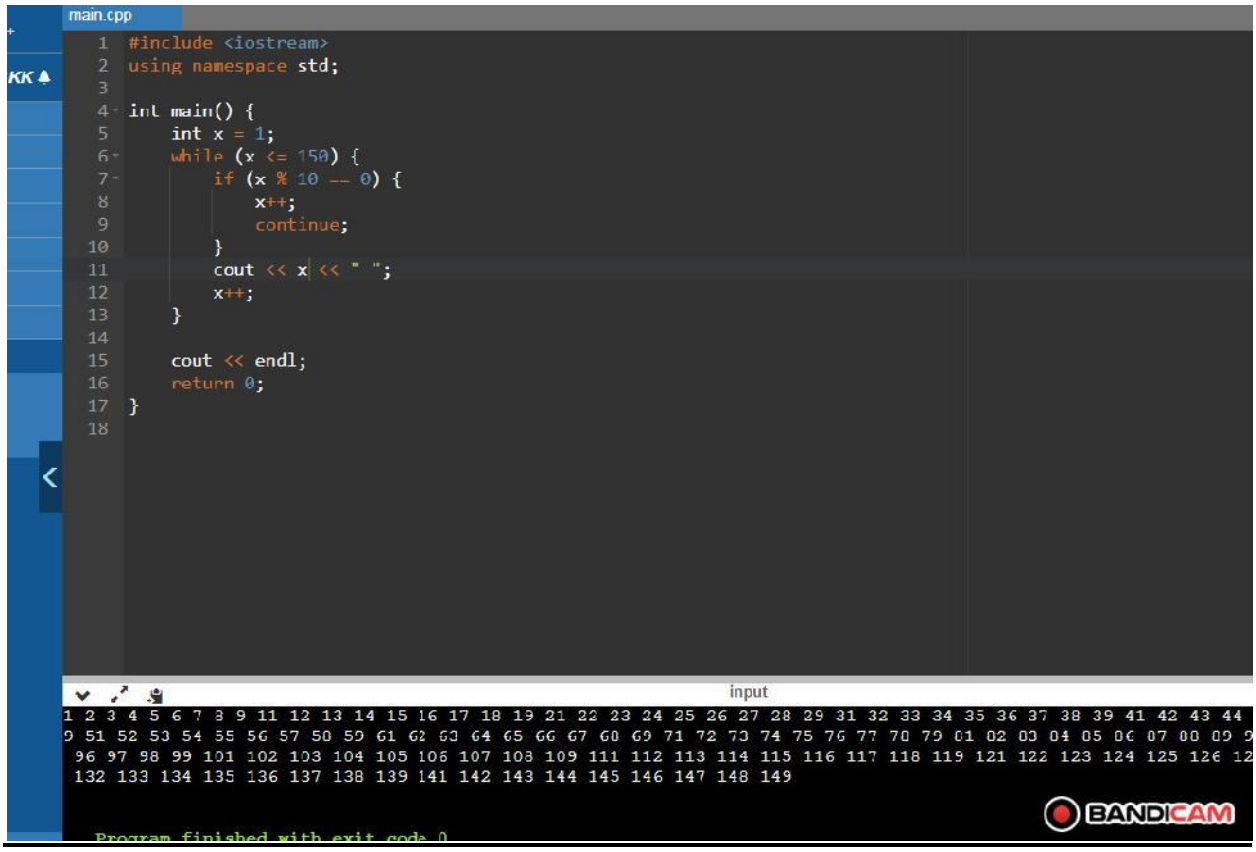
Question #01: Write a program in C++ that prints the numbers from 1 to 150 except the multiples of 10. Make use of the continue statement.

Input:

```
#include <iostream>

using namespace std;


int main() {

   int x = 1;

   while (x <= 150) {

      if (x % 10 == 0) {

         x++;

         continue;

      }

      cout << num << " ";

      x++;

   }


   cout << endl;
```

```
    return 0;

}
```

Output:



Question #02: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.

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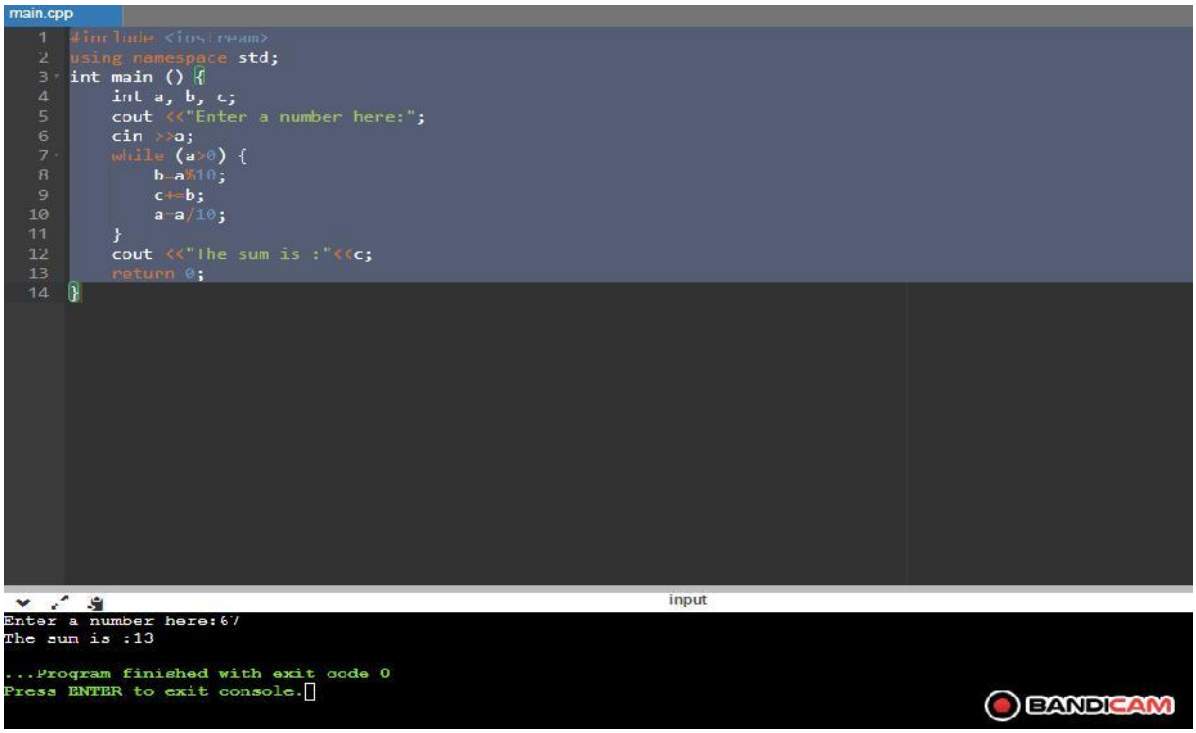
Input:

```
#include <iostream>
using namespace std;
int main () {
   int a, b, c;
   cout <<"Enter a number here:";
   cin >>a;
   while (a>0) {
      b=a%10;
      c+=b;
      a=a/10;
   }
   cout <<"The sum is :"<<c;
   return 0;
}
```

Output:



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Question #03: Write a program in C++ to check whether a number is prime or not.

Input:

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

int main() {
   int a;
   bool pr = true;
   cout << "Enter a number: ";
   cin >> a;

   if (a <= 1) {
      pr = false;
      for (int i = 2; i <= a / 2; i++) {
         if (a % i == 0) {
            pr = false;
            break;
         }
      }
   }
   if (pr) {
      cout << a << " The given number is a prime number." << endl;
   } else {
      cout << a << " The given number is a prime number." << endl;
   }
return 0;
}
```

Output:

main.cpp

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

int main() {
    int a;
    bool pr = true;
    cout << "Enter a number: ";
    cin >> a;

    if (a <= 1) {
        pr = false;
        for (int i = 2; i <= a / 2; i++) {
            if (a % i == 0) {
                pr = false;
                break;
            }
        }
    }

    if (pr) {
        cout << a << " The given number is a prime number." << endl;
    } else {
        cout << a << " The given number is a prime number." << endl;
    }

    return 0;
}
```

input

```
Enter a number: 68
68 The given number is a prime number.


...Program finished with exit code 0
Press ENTER to exit console.
```