1. Predict the output

```
#include <bits/stdc++.h>
using namespace std;
int main() {
while ('1' < '2')
cout << "In while loop" << endl;
}</pre>
```

Output:

In while loop
In while loop
In while loop
.....Infinite times

2.Predict the output

```
#include <bits/stdc++.h>
using namespace std;
int main() {
int t = 10;
while (t /= 2) {
cout << "Hello" << endl;
}
}</pre>
```

Output:

Hello

Hello

Hello

3.Predict the output

```
#include <bits/stdc++.h>
using namespace std;
int main() {
for (int x = 1; x * x <= 10; x++)
cout << "In for loop" << endl;
}</pre>
```

Output:

In for loop In for loop In for loop

4.Predict the output

```
#include <bits/stdc++.h>
using namespace std;
int main() {
int x = 10, y = 0;
while (x >= y) {
x--;
y++;
cout << x << " " << y << endl;
}
}</pre>
```

Output:

9 1

8 2

73

64

55

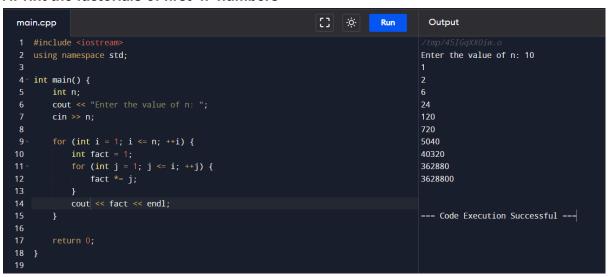
46

5.WAP to print the sum of all the even digits of a given number.

6.WAP to print the sum of a given number and its reverse.

```
main.cpp
                                                                       [] 🔅
                                                                                     Run
                                                                                                 Output
   using namespace std;
                                                                                               Enter a number: 12
                                                                                               The sum of 12 and its reverse 21 is: 33
4 int main() {
        int number, reversedNumber = 0, originalNumber;
| cout << "Enter a number: ";</pre>
                                                                                               === Code Execution Successful ===
        cin >> number;
        originalNumber = number;
        while (number > 0) {
   int digit = number % 10;
             reversedNumber = reversedNumber * 10 + digit;
14
             number /= 10:
        int sum = originalNumber + reversedNumber;
        cout << "The sum of " << originalNumber << " and its reverse " <<</pre>
             reversedNumber << " is: " << sum << endl;</pre>
```

7. Print the factorials of first 'n' numbers



8. Print first 'n' fibonacci numbers.

```
main.cpp
                                                                 [] 🔅
                                                                              Run
                                                                                        Output
                                                                                       1 1 2 3 5 8 13 21 34 55
4 int main() {
                                                                                       === Code Execution Successful ===
       int firstFib = 1, secondFib = 1;
       cout << firstFib << " " << secondFib << " ";</pre>
       for (int i = 3; i \le n; i++) {
           int nextFib = firstFib + secondFib;
           cout << nextFib << '
           firstFib = secondFib;
           secondFib = nextFib;
16
       cout << endl;</pre>
```

9.Write a program to print out all Armstrong numbers between 1 and 500. If the sum of cubes of each digit of the number is equal to the number itself, then the number is called an Armstrong number. For example, 153 = (1 * 1 * 1) + (5 * 5 * 5) + (3 * 3 * 3)

```
[] 🔅
                                                                                  Run
                                                                                              Output
main.cpp
                                                                                             Armstrong numbers between 1 and 500 are:
3 using namespace std;
                                                                                             1 153 370 371 407
5 int main() {
       cout << "Armstrong numbers between 1 and 500 are: " << endl;</pre>
                                                                                            === Code Execution Successful ===
       for (int number = 1; number <= 500; number++) {</pre>
           int sum = 0;
int temp = number;
           while (temp > 0) {
               int digit = temp % 10;
                sum += pow(digit, 3);
               temp /= 10;
           if (sum == number) {
    cout << number << " ";</pre>
        cout << endl;</pre>
```