

1. WAP for printing all natural numbers till 20.

```
2. #include <iostream>
3. using namespace std;
4. int main()
5. {
6.     for (int i = 1; i <= 20; i++)
7.     {
8.         cout << i << " ";
9.     }
10.    return 0;
11. }
```

Input:

Copy

Expected Output:

Copy

Received Output:

Copy

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

2. WAP for printing all natural numbers in reverse order starting from 20.

```
#include <iostream>
using namespace std;
int main()
{
    for (int i = 20; i >= 1; i--)
    {
        cout << i << endl;
    }
    return 0;
}
```

Input:

Copy

Expected Output:

Copy

Received Output:

Copy

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

3. WAP for printing all even numbers from 1 to 20.

```
#include <iostream>
using namespace std;
int main()
{
    for (int i = 1; i <= 20; i++)
    {
        if (i % 2 == 0)
        {
            cout << i << endl;
        }
    }
}
```

```
    return 0;  
}
```

Input:

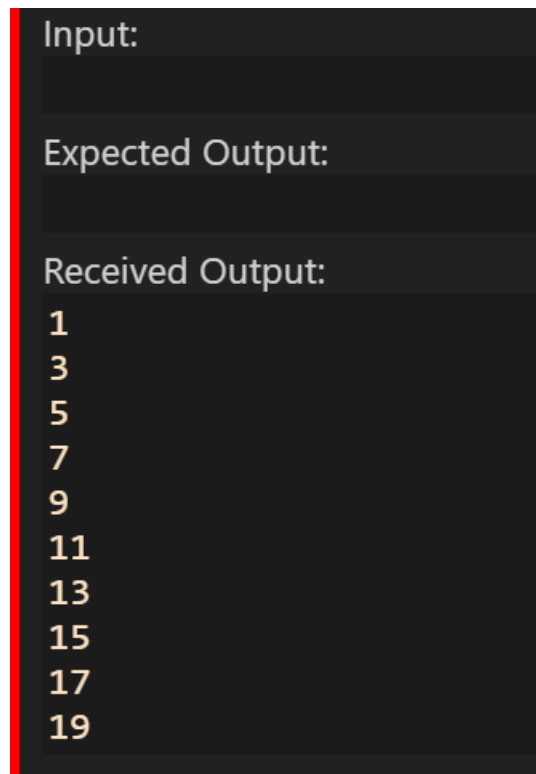
Expected Output:

Received Output:

2
4
6
8
10
12
14
16
18
20

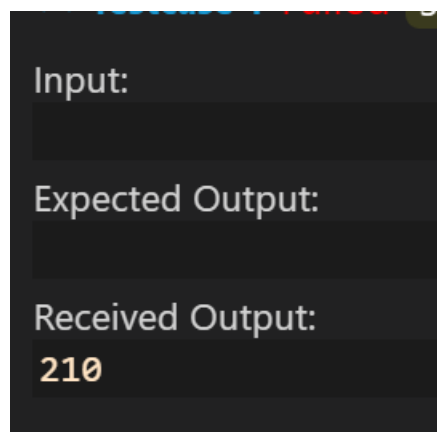
4. WAP for printing all odd numbers from 1 to 20.

```
#include <iostream>  
using namespace std;  
int main()  
{  
    for (int i = 1; i <= 20; i++)  
    {  
        if (i % 2 != 0)  
        {  
            cout << i << endl;  
        }  
    }  
    return 0;  
}
```



5. WAP for adding all numbers from 1 to 20.

```
#include <iostream>
using namespace std;
int main()
{
    int sum = 0;
    for (int i = 1; i <= 20; i++)
    {
        sum = sum + i;
    }
    cout << sum << endl;
    return 0;
}
```



6. WAP for finding sum of all even numbers till 20.

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

```

int main()
{
    int sum = 0;
    for (int i = 1; i <= 20; i++)
    {
        if (i % 2 == 0)
        {
            sum = sum + i;
        }
    }
    cout << sum;
    return 0;
}

```

Input:

Expected Output:

Received Output:

110

7. WAP for finding sum of all odd numbers till 20.

```

#include <iostream>
using namespace std;
int main()
{
    int sum = 0;
    for (int i = 1; i <= 20; i++)
    {
        if (i % 2 != 0)
        {
            sum = sum + i;
        }
    }
    cout << sum;
    return 0;
}

```

Input:

Expected Output:

Received Output:

100

8. WAP for printing multiplication table of a number. For eg. Display should be “ 2 X 1 = 2”

```

#include <iostream>
using namespace std;
int main()
{
    int num;
}

```

```
cin >> num;
for (int i = 1; i <= 10; i++)
{
    cout << num << "x" << i << "=" << num * i << endl;
}
return 0;
}
```

Input:

2

Expected Output:

Received Output:

2x1=2

2x2=4

2x3=6

2x4=8

2x5=10

2x6=12

2x7=14

2x8=16

2x9=18

2x10=20

9. WAP to calculate factorial of a number.

```
#include <iostream>
using namespace std;
int main()
{
    int num;
    cin >> num;
    int fact = 1;
    for (int i = 1; i <= num; i++)
    {
        fact = fact * i;
    }
    cout << fact << endl;
    return 0;
}
```

Input:

5

Expected Output:

Received Output:

120

10. WAP to check whether a number is prime or not.

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

bool isPrime(int n)
{
    if (n == 0 || n == 1)
    {
        return false;
    }
    for (int i = 2; i * i < n; i++)
    {
        if (n % i == 0)
        {
            return false;
        }
    }
    return true;
}

int main()
{
    int n;
    cin >> n;
    if (isPrime(n))
    {
        cout << "prime number";
    }
    else
    {
        cout << "not a prime number";
    }
    return 0;
}
```

Input:

5

Expected Output:

Received Output:

prime number

11. WAP to print all digits of a number and their sum.

```
12. #include <iostream>
13. using namespace std;
14. int main()
15. {
16.     int n;
17.     cin >> n;
18.     int sum = 0;
19.     while (n > 0)
20.     {
21.         int lastDigit = n % 10;
22.         sum = sum + lastDigit;
23.         n = n / 10;
24.     }
25.     cout << sum;
26.     return 0;
27. }
```

Input:
123

Expected Output:

Received Output:
6

12. WAP to print reverse of a number.

```
#include <iostream>
using namespace std;
int main()
{
    int n;
    cin >> n;
    int reverseNum = 0;
    while (n > 0)
    {
        int lastDigit = n % 10;
        reverseNum = reverseNum * 10 + lastDigit;
        n = n / 10;
    }
    cout << reverseNum;
    return 0;
}
```

Input:
123

Expected Output:

Received Output:
321

13. WAP to check whether the number is Armstrong or not.

```
#include <bits/stdc++.h>
using namespace std;
int main()
{
    int n;
    cin >> n;
    int sum = 0;
    int originalNum = n;
    int digit = 0;
    while (n > 0)
    {
        int lastDigit = n % 10;
        digit++;
        n = n / 10;
    }
    n = originalNum;
    while (n > 0)
    {
        int lastDigit = n % 10;
        sum += pow(lastDigit, digit);
        n = n / 10;
    }
    if (originalNum == sum)
    {

```

```
    cout << "armstrong No";  
}  
else  
{  
    cout << "not a armstrong no";  
}  
return 0;  
}
```

Input:

153

Expected Output:

Received Output:

armstrong No

14. WAP to print the Fibonacci series in a given range.

```
#include <iostream>  
using namespace std;  
int main()  
{  
    int n;  
    cin >> n;  
    int fib[n + 1];  
    fib[0] = 0;  
    fib[1] = 1;  
    for (int i = 2; i <= n; i++)  
    {  
        fib[i] = fib[i - 1] + fib[i - 2];  
    }  
    for (int i = 0; i < n; i++)  
    {  
        cout << fib[i] << endl;  
    }  
    return 0;  
}
```

Input:

5

Expected Output:

Received Output:

0

1

1

2

3

15. WAP to check whether the number entered is palindrome or not.

```
#include <iostream>
using namespace std;
int main()
{
    int n;
    cin >> n;
    int originalNum = n;
    int reverseNum = 0;
    while (n > 0)
    {
        int lastDigit = n % 10;
        reverseNum = reverseNum * 10 + lastDigit;
        n = n / 10;
    }
    if (originalNum == reverseNum)
    {
        cout << "palindrome no";
    }
    else
    {
        cout << "not a palindrome no";
    }
    return 0;
}
```

Input:

121

Expected Output:

Received Output:

palindrome no